NEW SERIES, No. 7. SEPTEMBER, 1889.

PUBLICATIONS OF THE

# AMERICAN

# STATISTICAL ASSOCIATION.

I. PRISON STATISTICS OF THE UNITED STATES FOR 1888. By Roland P. Falkner, Ph.D.

II. AN ACCOUNT OF THE COLLECTIONS OF THE AMERICAN STATISTICAL ASSOCIATION. By Hon. Samuel A. Green, M.D.

III. GALTON'S STATISTICAL METHODS. By Prof. John Dewey, Ph.D.

IV–XII. Insurance Records; Municipal Budgets; Reports of Treasury Bureau of Statistics; Statistics of Citizenship in Massachusetts; Statistics of New Jersey; Railroad Statistics; Mechanical Statistical Devices; Minor Notices; Books Received by the Library, Prison Reports.

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ORGANIZED NOVEMBER 27, 1839.

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OF THE
# AMERICAN STATISTICAL ASSOCIATION.

ARTICLE I. This Association shall be denominated the AMERICAN STATISTICAL ASSOCIATION.

ART. II. The objects of the Association shall be to collect, preserve, and diffuse statistical information in the different departments of human knowledge.

ART. III. The Association shall be composed of Fellows and Honorary Members.

ART. IV. All members shall be chosen by ballot; nomination for membership shall first be submitted to the Board of Directors; if approved by them, the names shall be presented to the Association, and for election the affirmative votes of four fifths of the members present shall be necessary. Each Fellow shall pay annually two dollars, or twenty dollars at some one time.

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NEW SERIES, No. 7. SEPTEMBER, 1889.

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Prison Reports.

AMERICAN

STATISTICAL ASSOCIATION.

NEW SERIES, No. 7. SEPTEMBER, 1889.

# PRISON STATISTICS OF THE UNITED STATES FOR 1888.

By Roland P. Falkner, Ph. D.,

University of Pennsylvania.

In the following pages an attempt has been made to present such statistics of the prisons of the United States as possess a sociological interest. This does not, it is true, entirely exhaust the reports* from which the data are drawn. These documents are largely occupied with financial showings often carefully elaborated, and very important from an administrative point of view, though they do not enter into the present discussion. The reports of the prison physicians contain, in some instances, valuable data that seem capable of contributing much to our knowledge of prison hygiene, but they are, as a rule, very scant and remarkably diversified in their plans of arrangement. The lack of uniformity conspicuous in the medical and financial portions of the reports does not make itself so strongly felt in the personal statistics of the prisoners. It has been hoped, therefore, that a col-

* The writer desires to express his thanks to the prison wardens who so kindly furnished him with the reports.

lection of these facts cannot fail to add something to our knowledge of the criminal population, and to throw some light incidentally upon problems of criminal statistics.

In confining this study to the data for state penal institutions* we have been guided primarily by the accessibility of the materials. At the same time considerations of a more theoretical nature favor the treatment of this category of prisons separately. Our state prisons have a homogeneous convict population. In some of its general tables the Tenth Census includes all prisoners, necessarily therefore some who are not serving sentences. The county jails and houses of correction deal, as a rule, with another class of offenders. The rapidly changing population due to short sentences renders the collection of accurate statistics difficult, and unfits the population of these institutions for comparison with that of the state prisons. Some of the county prisons in the more populous states approach the state institutions in size, yet their population does not essentially differ from that of smaller county jails.

At the commencement of the inquiry we are met with a diversity of the materials which for certain investigations would be fatal.

A glance at the foregoing table shows a great variety of fiscal years in the different states, dependent, presumably, upon local statutes. If our object were to compare crime in two states by the ratio of the convicts to the population, this would manifestly render the inquiry impossible, even if the line of demarcation between the state prisons and the county jails were in each the same. Our inquiry concerns rather groups of convicts in the different states at approximately

* In the following tables certain states are omitted. From Arkansas and Louisiana no replies were received. Kentucky, Iowa, and Mississippi published their last biennial reports in 1887. Georgia publishes lists but no summaries, and Oregon furnishes only a few figures for all who were at any time within two years inmates of the prison, a plan differing from that of all other states. In Rhode Island the state prison is at the same time the Providence County jail, and the data for the two are given together. Delaware appears to have no state prison. In the Elmira (N. Y.) Reformatory reports no data are given for separate years, but all inmates, since the opening of the institution, are massed together.

*Table I.* SEX AND RACE OF CONVICTS.

| | Year Ends. | Mode of Enumeration. | Number. | Sex. | | Per Cent. | | Race. | | | | | Per Cent. | | | | | Proportion of Colored to Total Population.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Male. | Female. | Male. | Female. | White. | Colored. | Chinese. | Indians. | Mexicans. | White. | Colored. | Chinese. | Indians. | Mexicans. | |
| Maine | Nov. 30. | O.H. | 152 | 147 | 5 | 96.71 | 3.29 | .... | .... | .. | .. | .. | .... | .... | .... | .... | .... | .... |
| New Hampshire | April 30. | O.H. | 115 | 113 | 2 | 98.26 | 1.74 | .... | .... | .. | .. | .. | .... | .... | .... | .... | .... | .... |
| Vermont | July 31. | O.H. | 94 | 90 | 4 | 95.74 | 4.26 | 94 | .... | .. | .. | .. | 100 | .... | .... | .... | .... | .... |
| Massachusetts | Sept. 30. | R. | 160 | .... | .. | .... | .... | .... | .... | .. | .. | .. | .... | .... | .... | .... | .... | .... |
| Massachusetts Reformatory | " | R. | 673 | .... | .. | .... | .... | .... | .... | .. | .. | .. | .... | .... | .... | .... | .... | .... |
| Connecticut | June 30. | O.H. | 301 | 295 | 6 | 98.01 | 1.99 | 275 | 26 | .. | .. | .. | 91.36 | 8.64 | .... | .... | .... | 1.9 |
| New York, Sing Sing | Sept. 30. | O.H. | 1,405 | .... | .. | .... | .... | 1,320 | 83 | .. | 2 | .. | 93.95 | 5.91 | .... | .14 | .... | |
| " Auburn | " | O.H. | 1,248 | .... | .. | .... | .... | 1,172 | 67 | 3 | 6 | .. | 93.91 | 5.37 | .24 | .48 | .... | 1.3 |
| " Clinton | " | R. | 233 | .... | .. | .... | .... | 215 | 18 | .. | .. | .. | 92.27 | 7.73 | .... | .... | .... | |
| Pennsylvania, Eastern | Dec. 31. | R. | 510 | 492 | 18 | 96.47 | 3.53 | 439 | 71 | .. | .. | .. | 86.08 | 13.92 | .... | .... | .... | |
| " Western | " | R. | 266 | 262 | 4 | 98.50 | 1.50 | 246 | 20 | .. | .. | .. | 92.48 | 7.52 | .... | .... | .... | 2.0 |
| New Jersey | Oct. 31. | O.H. | 881 | 842 | 39 | 95.57 | 4.43 | 709 | 172 | .. | .. | .. | 80.48 | 19.52 | .... | .... | .... | 3.4 |
| Ohio | " | R. | 794 | 771 | 23 | 97.10 | 2.90 | 654 | 130 | .. | 10 | .. | 82.37 | 16.37 | .... | 1.26 | .... | 2.5 |
| Indiana, North | " | O.H. | 702 | .... | .. | .... | .... | 636 | 66 | .. | .. | .. | 90.60 | 9.40 | .... | .... | .... | |
| " South | " | O.H. | 739 | .... | .. | .... | .... | .... | .... | .. | .. | .. | .... | .... | .... | .... | .... | 2.0 |
| Illinois, Joliet | Sept. 30. | R. | 650 | 637 | 13 | 98.00 | 2.00 | 586 | 63 | 1 | .. | .. | 90.16 | 9.69 | .15 | .... | .... | |
| " Chester | " | R. | 340 | 336 | 4 | 98.82 | 1.18 | 292 | 48 | .. | .. | .. | 85.88 | 14.12 | .... | .... | .... | 1.6 |
| Michigan † | June 30. | R. | 466 | .... | .. | .... | .... | 439 | 27 | .. | .. | .. | 94.21 | 5.79 | .... | .... | .... | .9 |
| Wisconsin | Sept. 30. | R. | 211 | 203 | 8 | 96.21 | 3.79 | 205 | 3 | .. | 3 | .. | 97.16 | 1.42 | .... | 1.42 | .... | .2 |
| Minnesota | July 31. | R. | 214 | .... | .. | .... | .... | .... | .... | .. | .. | .. | .... | .... | .... | .... | .... | .... |
| Missouri ‡ | Dec. 31. | R. | 1,523 | 1,480 | 43 | 97.18 | 2.82 | 1,099 | 424 | .. | .. | .. | 72.16 | 27.84 | .... | .... | .... | 6.7 |
| Kansas | June 30. | O.H. | 929 | .... | .. | .... | .... | 770 | 153 | .. | 5 | 1 | 82.88 | 16.47 | .... | .54 | .11 | 4.3 |
| Nebraska ‡ | Nov. 30. | R. | 316 | 312 | 4 | 98.73 | 1.27 | 293 | 23 | .. | .. | .. | 92.72 | 7.28 | .... | .... | .... | .5 |
| Colorado ‡ | " | R. | 405 | .... | .. | .... | .... | .... | .... | .. | .. | .. | .... | .... | .... | .... | .... | .... |
| Nevada | Dec. 31. | O.H. | 99 | .... | .. | .... | .... | .... | .... | .. | .. | .. | .... | .... | .... | .... | .... | .... |
| California, San Quentin | June 30. | O.H. | 1,377 | .... | .. | .... | .... | 1,164 | 16 | 174 | 20 | 3 | 84.53 | 1.16 | 12.64 | 1.45 | .22 | |
| " Folsom | " | O.H. | 421 | .... | .. | .... | .... | .... | .... | .. | .. | .. | .... | .... | .... | .... | .... | .7 |
| Maryland | Nov. 30. | O.H. | 592 | 554 | 38 | 93.59 | 6.41 | 226 | 366 | .. | .. | .. | 38.18 | 61.82 | .... | .... | .... | 22.5 |
| Virginia | Sept. 30. | R. | 372 | 348 | 24 | 93.55 | 6.45 | 84 | 288 | .. | .. | .. | 22.58 | 77.42 | .... | .... | .... | 41.8 |
| West Virginia | " | R. | 116 | 113 | 3 | 97.41 | 2.59 | 76 | 40 | .. | .. | .. | 65.52 | 34.48 | .... | .... | .... | 4.2 |
| Tennessee | Nov. 30. | O.H. | 1,363 | 1,323 | 40 | 97.06 | 2.94 | 380 | 983 | .. | .. | .. | 27.88 | 72.12 | .... | .... | .... | 26.1 |
| North Carolina | " | R. | 528 | 492 | 36 | 93.18 | 6.82 | 83 | 441 | .. | 1 | .. | 15.72 | 84.09 | .... | .19 | .... | 38.0 |
| South Carolina | Oct. 31. | R. | 546 | 514 | 32 | 94.14 | 5.86 | 35 | 511 | .. | .. | .. | 6.41 | 93.59 | .... | .... | .... | 60.7 |
| Alabama | Sept. 30. | O.H. | 740 | 697 | 43 | 94.19 | 5.81 | 86 | 654 | .. | .. | .. | 11.62 | 88.38 | .... | .... | .... | 47.5 |
| Texas | Oct. 31. | O.H. | 3,302 | 3,271 | 31 | 99.06 | .94 | 1,316 | 1,620 | .. | 3 | 363 | 39.85 | 49.06 | .... | .09 | 11.00 | 24.7 |

NOTE. O. H. signifies the number remaining on hand at the end of the year; R. those received during the year or other period.
* From Scribner's Statistical Atlas. † 21 months. ‡ 2 years.

the same time, and hence such differences as are here observed can have no appreciable effect upon the results.

Of a more serious nature is the difference arising from two distinct modes of counting the prisoners, one plan taking the population at a given time, and the other giving the number received during the year. General reasons may be brought forward for each method. Where it is desired to compare the prison population with that of the country at large the former method is appropriate, and is followed in the census. A closer study of the prison population, following it from year to year, observing its increase or decrease, and its connection with other events of the same period, as, for instance, industrial crises or prolonged strikes, necessitates the latter method. For our purposes, therefore, this has seemed preferable, and where there has been room for choice it has been selected. But in few instances was this the case. In general, one is obliged to follow the method of each report. Nor does any underlying purpose in the selection of one or the other appear. It seems to be mere accident, and in New York, indeed, Clinton prison follows a different rule from the other state prisons. As the lack of uniformity exists it becomes necessary to estimate as far as possible the effect of the two methods upon the results obtained. It affects most conspicuously the sentences, the proportion of longer sentences being greater where the population at a given time is enumerated, and in the other case the proportion of shorter terms being larger. If figures are needed to support such a self-evident proposition, they are abundantly found in a comparison of the two plans where they exist, side by side, in the same prison. We give the numerical proportion of each sentence being served to the total number of sentences.

| | Under 1 Year. | 1 | 2 | 3 | 4 | 5 | 6–10 | 10–15 | 15–20 | 20–30 | 30 and more. | Life. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Massachusetts, O.H.*... | .... | .18 | .53 | 18.44 | 12.59 | 20.39 | 17.73 | 12.77 | 4.08 | 2.66 | .35 | 10.28 |
| " R..... | .... | .63 | ..... | 33.13 | 20.00 | 21.25 | 10.62 | 8.12 | 1.87 | 3.75 | .... | .63 |
| Illinois, Joliet, O.H.... | .07 | 23.23 | 13.07 | 14.02 | 5.35 | 10.15 | 9.76 | 10.31 | 4.02 | 4.55 | .99 | 4.48 |
| " R..... | .15 | 52.62 | 16.62 | 11.38 | 2.31 | 6.46 | 4.15 | 2.16 | .61 | 1.30 | .46 | 1.69 |

* Here as elsewhere the figures relate to the year 1888, as in Table I, unless otherwise indicated.

It may be added also that in the first case the average sentence at Joliet was 5 years 6 months and 17 days, and in the second, 2 years 4 months 24 days. Now, it must be clear that this fundamental difference of the two modes of enumeration, as to sentences, must entail differences in other respects. Thus, for instance, a detailed examination of the crimes committed would in all probability show a greater proportion of the graver crimes by the first method, and of the lesser crimes by the second method of enumeration. Thus crimes against the person are, in the first case, 26.77 per cent of all in Massachusetts, and in the second 15.63; and at Joliet we have the relations 17.08 and 23.94 in the respective cases. Beyond this we cannot pursue our investigations for lack of sufficient data. The different methods bring about dissimilar results when applied to the age of the convicts. In the following figures we give the percentage of each age in the total number.

| | Under 20 | 20-25 | 25-30 | 30-40 | 40-50 | 50-60 | 60-70 | Over 70 |
|---|---|---|---|---|---|---|---|---|
| Massachusetts, O.H.. | 2.84 | 18.26 | 21.28 | 31.38 | 15.96 | 7.98 | 1.42 | .88 |
| " R..... | 11.25 | 30.00 | 20.00 | 23.12 | 11.87 | 3.75 | .... | .... |
| Wisconsin, O.H. ..... | 8.46 | 42.70 | | 24.80 | 9.56 | 8.68 | 4.12 | 1.69 |
| " R..... | 9.48 | 46.45 | | 26.54 | 9.00 | 5.69 | 2.37 | .47 |

One cause of difference is manifestly the time already passed in confinement, which the census gave as one year and nine months in 1880. In some prisons the figures given

are for the time of entrance in the institution; but where this is not expressed it must be supposed that this is not the case. The time spent in confinement seems to explain sufficiently such differences as we meet in the Wisconsin prison. On the other hand, it would seem insufficient in Massachusetts unless the sentences there are very severe. One is almost tempted to suppose that the older prisoners commit the more heinous offences, and hence receive the longest sentences. Yet such evidence as I have been able to collect does not support this view. Taking the length of the sentence, as a rough measure of the gravity of the offence, I have taken the average age of those convicted for each term in the Eastern Penitentiary of Pennsylvania with the following result: —

| | Under 1 | 1 | 2 | 3 | 4 | 5 | 6-10 | 10-15 | Total. |
|---|---|---|---|---|---|---|---|---|---|
| Number..... | 6 | 261 | 99 | 59 | 27 | 26 | 17 | 15 | 510 |
| Average age under each term, years. | 30.0 | 29.02 | 31.63 | 29.55 | 31.44 | 31.69 | 32.82 | 27.57 | 29.95 |

In these varying figures one seeks in vain the corroboration of the proposed explanation. Differences between the two methods of enumeration seem to be, more or less, directly traceable to the fact that one emphasizes the long term prisoners more than the other. Hence, any influence upon other matters to be considered in this study, as sex, race, conjugal condition, occupation, and so forth, is not to be assumed without direct positive proofs which are lacking.

If we proceed now to an examination of Table I, we find the greatest number of female convicts in North Carolina, where they form, however, only 6.82 per cent of the total number. The percentage of female prisoners is low in the United States, having been in 1880 only 9.33 per cent of all prisoners, whereas in Europe it varies from 7.0 per cent in England (1886–87) to 15.7 per cent in France (1881) for the penitentiaries. Compare now with these ratios the

figures of the table, and we find that they fall much below the figures for the United States. In some cases where no figures are given the presumption is that the population is wholly male. Two things may explain this difference. It may be that the states, as a rule, provide other means for the incarceration of women, as in county prisons. Or, again, women may not participate relatively so much in crimes of a heinous nature as in less serious offences. The latter aspect of the case receives corroboration from the census, which showed that in 1880 women composed only 2.78 per cent of the prisoners having sentences of one year or more, but 20.12 per cent of those serving sentences of less than a year. Passing again to the table we observe that the highest percentages of women are to be found in the southern states.

In respect to races, the most important point is the negro's known tendency to crime. In order to appreciate its extent, we must compare the percentages here shown with the percentage of negroes in the general population. To facilitate this comparison, a column giving this percentage has been added to the table. Throughout we find the percentage of colored prisoners much greater than that of the colored population. Except where the latter is very large, as in the southern states, the former is generally more than double its size.

A most cursory examination of the data relating to age shows that the prisoners are, as a rule, in the prime of life. There are but few prisons in which more than half the inmates are not less than 30 years of age. The higher age classes are not so well represented among the prisoners as in the general population. From facts similar to these, in Belgium, Quetelet deduced a greater tendency to crime in youth than in riper years. On the other hand it seems quite probable that the mortality of the criminal classes is less favorable than the general rate. This offers an easy and matter-of-fact explanation of this generally observed phenomenon; yet, to support either hypothesis with figures presents grave diffi-

*Table II.* AGE.

| *Age.* | Maine. | New Hampshire. | Vermont.‡ | Massachusetts. | Mass. Reformatory (1).* | Connecticut. | New York, Sing Sing. | New York, Auburn. | New York, Clinton. | Pennsylvania, Eastern. | Pennsylvania, Western.* | New Jersey. | Ohio.† | Indiana, North.† | Indiana, South.† ‡ | Illinois, Joliet. | Illinois, Chester. | Michigan. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Under 20. | 22 | 7 | 3 | 18 | 182 | 28 | 192 | 87 | 24 | 57 | 35 | 119 | 110 | 76 | 124 | 98 | 53 | 17 |
| 20–25. | 32 | 60 | 18 | 48 | 145 | 145 | 493 | 344 | 63 | 134 | 57 | 238 | 263 | 194 | 135 | 338 | 176 | 61 |
| 25–30. | 36 | | 23 | 32 | 101 | | 304 | 298 | 52 | 111 | 68 | 137 | 159 | 179 | 113 | | | 130 |
| 30–35. | 17 | 25 | 19 | 37 | 66 | 74 | 160 | 306 | 26 | 68 | 40 | 213 | 163 | 74 | 52 | 134 | 69 | 81 |
| 35–40. | 14 | | 11 | | 60 | | 93 | | 21 | 54 | 23 | | | 73 | 42 | | | 63 |
| 40–50. | 20 | 16 | 15 | 19 | 43 | 30 | 124 | 141 | 29 | 57 | 24 | 111 | 62 | 63 | 49 | 56 | 20 | 67 |
| 50–60. | 6 | 7 | 4 | 6 | 7 | 24 | 30 | 45 | 11 | 22 | 10 | 48 | 21 | 34 | 15 | 21 | 15 | 33 |
| 60–70. | 3 | | .. | .. | 3 | | 9 | 21 | 4 | 7 | 9 | 14 | 15 | 3 | 8 | 2 | 5 | 13 |
| Over 70. | 2 | | 1 | .. | | | ... | 6 | 3 | ... | .. | 1 | 1 | 6 | 1 | 1 | 2 | 1 |
| | | | | | | | *Per Cent.* | | | | | | | | | | | |
| Under 20. | 14.47 | 6.09 | 3.19 | 11.25 | 29.98 | 9.30 | 13.67 | 6.97 | 10.30 | 11.18 | 13.16 | 13.51 | 13.85 | 10.83 | 23.01 | 15.08 | 15.59 | 3.65 |
| 20–25. | 21.05 | 52.17 | 19.16 | 30.00 | 23.89 | 48.17 | 35.09 | 27.56 | 27.03 | 26.27 | 21.43 | 27.01 | 33.12 | 27.63 | 25.05 | 52.00 | 51.76 | 13.09 |
| 25–30. | 23.68 | | 24.46 | 20.00 | 16.64 | | 21.64 | 23.88 | 22.32 | 21.76 | 25.56 | 15.55 | 20.03 | 25.50 | 20.96 | | | 27.90 |
| 30–35. | 11.18 | 21.74 | 20.21 | 23.12 | 10.87 | 24.59 | 11.38 | 24.52 | 11.16 | 13.33 | 15.04 | 24.18 | 20.53 | 10.54 | 9.65 | 20.62 | 20.29 | 17.38 |
| 35–40. | 9.22 | | 11.70 | | 9.89 | | 6.62 | | 9.01 | 10.59 | 8.65 | | | 10.40 | 7.79 | | | 13.52 |
| 40–50. | 13.16 | 13.91 | 15.96 | 11.87 | 7.09 | 9.97 | 8.83 | 11.31 | 12.45 | 11 18 | 9.02 | 12.60 | 7.81 | 8.97 | 9.09 | 8.62 | 5.88 | 14.38 |
| 50–60. | 3.95 | 6.09 | 4.26 | 3.75 | 1.15 | 7.97 | 2.14 | 3.61 | 4.72 | 4.31 | 3.76 | 5.45 | 2.64 | 4.85 | 2.78 | 3.23 | 4.41 | 7.08 |
| 60–70. | 1.97 | | .... | .... | .49 | | .63 | 1.68 | 1.72 | 1.38 | 3.38 | 1.59 | 1.89 | .43 | 1.48 | .31 | 1.47 | 2.79 |
| Over 70. | 1.32 | | 1.06 | .... | | | .... | .49 | 1.29 | .... | .... | .11 | .13 | .85 | .19 | .14 | .60 | .21 |

Totals: (1) 607. (2) 690, the age of 50 prisoners being unknown. Irregular totals are indicated throughout in this way. * The first column includes all under 21 instead of 20. † These institutions report the ages inclusive of the higher number as 21–25, 26–30, 31–35, etc., and thus differ from the others. ‡ Age when committed.

*Table II. Continued.* AGE.

| Age. | Wisconsin. | Minnesota. | Missouri. | Kansas. | Nebraska. | Colorado. | Nevada.† | California, San Quentin. | California, Folsom. | Maryland. | Virginia. | West Virginia. | Tennessee. | North Carolina. | South Carolina. | Alabama (2). | Texas. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Under 20. | 20 | 29 | 320 | 167 | 41 | 52 | 31 | 105 | .. | 105 | 94 | .. | .. | 172 | 160 | 95 | 616 |
| 20–25. | 98 | 60 | 441 | 200 | 83 | 104 | | 297 | .. | 182 | 82 | .. | .. | 230 | 275 | 207 | 1086 |
| 25–30. | | 51 | 344 | 179 | 87 | 100 | 25 | 283 | .. | 118 | 51 | .. | .. | | | 129 | 728 |
| 30–35. | 56 | 46 | 143 | 273 | 57 | 49 | 28 | 207 | .. | 78 | 35 | .. | .. | 62 | 65 | 86 | 377 |
| 35–40. | | | 113 | | | 48 | | 172 | .. | 54 | 42 | .. | .. | | | 52 | 209 |
| 40–50. | 19 | 20 | 104 | | 25 | 40 | 6 | 215 | .. | 30 | 41 | .. | .. | 35 | 26 | 69 | 193 |
| 50–60. | 12 | 6 | 46 | | 15 | 9 | 7 | 74 | .. | 18 | 21 | .. | .. | 27 | 20 | 34 | 60 |
| 60–70. | 5 | 2 | 9 | | 7 | 3 | 2 | 18 | .. | 6 | 6 | .. | .. | 2 | | 13 | 26 |
| Over 70. | 1 | .. | 3 | | 1 | ... | .. | 6 | .. | 1 | .. | .. | .. | ... | | 5 | 7 |
| | | | | | | | *Per Cent.* | | | | | | | | | | |
| Under 20. | 9.48 | 13.55 | 21.01 | 20.13 | 12.97 | 12.84 | 31.32 | 7.63 | .. | 17.74 | 25.27 | .. | .. | 32.58 | 29.30 | 13.77 | 18.65 |
| 20–25. | 46.45 | 28.04 | 28.96 | 31.22 | 26.27 | 25.68 | | 21.57 | .. | 30.74 | 22.04 | .. | .. | 43.56 | 50.37 | 30.00 | 32.80 |
| 25–30. | | 23.83 | 22.59 | 19.27 | 27.53 | 24.69 | 25.15 | 20.55 | .. | 19.93 | 13.71 | .. | .. | | | 18.70 | 22.05 |
| 30–35. | 26.54 | 21.50 | 9.33 | 29.38 | 18.04 | 12.10 | 28.28 | 15.03 | .. | 13.18 | 9.41 | .. | .. | 11.74 | 11.90 | 12.46 | 11.42 |
| 35–40. | | | 7.42 | | | 11.85 | | 12.49 | .. | 9.12 | 11.29 | .. | .. | | | 7.54 | 6.32 |
| 40–50. | 9.00 | 9.35 | 6.83 | | 7.91 | 9.88 | 6.06 | 15.61 | .. | 5.07 | 11.02 | .. | .. | 6.64 | 4.76 | 10.00 | 5.84 |
| 50–60. | 5.69 | 2.80 | 3.02 | | 4.75 | 2.22 | 7.07 | 5.37 | .. | 3.04 | 5.65 | .. | .. | 5.11 | 3.67 | 4.93 | 1.82 |
| 60–70. | 2.37 | .93 | .59 | | 2.22 | .74 | 2.02 | 1.31 | .. | 1.01 | 1.61 | .. | .. | .37 | | 1.88 | .79 |
| Over 70. | .47 | .... | .19 | | .31 | .... | .... | .44 | .. | .17 | .... | .. | .. | .... | | .72 | .21 |

**Totals:** (1) 607. (2) 690, the age of 50 prisoners being unknown. Irregular totals are indicated throughout in this way. * The first column includes all under 21 instead of 20. † These institutions report the ages inclusive of the higher number as 21–25, 26–30, 31–35, etc., and thus differ from the others. ‡ Age when committed.

culties. It needs little insight to comprehend that by the time a man reaches forty years of age his mode of life is so well settled that, unless already a criminal, his temptation to crime is very slight. On the other hand, it may well be doubted whether any considerable number of hardened criminals, whose frames are apt to be broken by disease, dissipation, and the rigors of prison life, live much beyond this period. Two causes, therefore, operate to bring about the result observed in the tables, although there seems to be no method of measuring their relative force.

The foreign element in its relation to crime is a matter deserving special study. The foreign born furnish a larger quota to our prisons than the native born, as appears, indeed, from a casual glance at our table. In but a few states is the percentage of the foreigners, in the population at large, greater than in the prisons, and in most cases it is less. At the same time the margin of difference is slight. In fact, the census of 1880 showed that the foreign born do not participate relatively so strongly in the grave crimes as in the less serious offences. Whereas the foreign born made up 21.84 per cent of the prison population, they composed only 14.42 per cent of those serving sentences of at least one year's duration; but, on the other hand, as much as 35.96 per cent of those serving shorter terms. If the length of the sentence be taken as a measure of the severity of the crime, it would appear that the foreign born are less prone to commit grave offences than the native white, as their terms are shorter.* While the fact of greater criminality among the foreign born is well established, it does not apply equally to all elements of the foreign population, some of which evince a greater respect for the law than the native-born American. Our table makes a relatively bad showing for the foreign born in the states of Maine, New Hampshire, Vermont, and Michigan. These are all states in which the British-American element is well represented, forming in Michigan 38.14 per

* Tenth Census, Vol. xxi, page lii.

*Table III.* NATIVITY.

| | Native. | | | Foreign. | | | | | | | | | | | | | | | | | | | | | | Per Cent. | | Per Cent. Native. | | Percentage of Foreign Born to Total Population of U. S., 1880.* | Percentage of those Born in Other States to Total Native in the State, 1880. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total. | In State. | In Rest of U. S. | Total. | Ireland. | Germany. | England and Wales. | British America. | China. | Scotland. | Mexico. | Scandinavia. | France. | Italy. | Switzerland. | West Indies. | Austria. | Poland. | Holland. | Russia. | Spain. | South America. | Australia. | Other Countries. | Unknown. | Native. | Foreign. | In State. | In Other States. | | |
| Maine | 118 | 98 | 20 | 34 | 8 | 1 | 4 | 16 | ... | 1 | ... | 1 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 77.66 | 22.34 | 83.05 | 16.95 | 9.1 | 4.6 |
| New Hampshire | 81 | .... | .... | 34 | 9 | 4 | 7 | 10 | ... | 1 | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 70.43 | 29.57 | ..... | ..... | 13.3 | .... |
| Vermont | 73 | 44 | 29 | 21 | 2 | 5 | 4 | 8 | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 77.66 | 22.34 | 60.27 | 39.73 | 12.3 | 13.6 |
| Massachusetts | 113 | 64 | 49 | 47 | 13 | 2 | 12 | 12 | ... | 1 | ... | 2 | .. | 2 | 1 | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | 70.63 | 29.37 | 56.64 | 43.36 | 24.9 | 18.8 |
| " Reformatory (1) | 470 | 375 | 95 | 136 | 69 | 3 | 31 | 23 | ... | .. | ... | 3 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 5 | .. | 77.56 | 22.44 | 79.79 | 20.21 | | |
| Connecticut | 231 | 128 | 103 | 70 | 30 | 10 | 7 | 7 | ... | 1 | ... | 4 | 1 | 6 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | .. | 76.74 | 23.26 | 55.41 | 44.59 | 20.9 | 19.0 |
| New York, Sing Sing | 1,010 | 842 | 168 | 305 | 126 | 96 | 51 | 11 | ... | 7 | 1 | 9 | 8 | 45 | 5 | 3 | 12 | 4 | .. | 10 | 2 | .. | .. | 5 | .. | 71.89 | 28.11 | 83.37 | 16.63 | 23.8 | 8.1 |
| " Auburn | 923 | 733 | 190 | 325 | 93 | 75 | 31 | 42 | 3 | 5 | ... | 4 | 10 | 41 | 4 | 2 | 6 | 2 | 2 | 1 | 1 | 1 | .. | 2 | .. | 73.96 | 26.04 | 79.41 | 20.59 | | |
| " Clinton | 174 | 135 | 39 | 58 | 13 | 13 | 6 | 6 | 1 | 1 | ... | .. | 3 | 7 | 3 | .. | 3 | 1 | 1 | .. | .. | .. | .. | .. | 1 | 75.00 | 25.00 | 77.59 | 22.41 | | |
| Pennsylvania, Eastern | 388 | 267 | 121 | 122 | 37 | 37 | 10 | 3 | ... | 5 | ... | 2 | 3 | 14 | 1 | 1 | 6 | 1 | .. | 1 | 1 | .. | .. | .. | .. | 76.08 | 23.92 | 68.81 | 31.19 | 13.7 | 8.6 |
| " Western | 205 | 146 | 59 | 61 | 13 | 19 | 16 | 4 | ... | 2 | ... | 2 | .. | 4 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 77.07 | 22.93 | 71.22 | 28.78 | | |
| New Jersey | 628 | 319 | 309 | 253 | 76 | 80 | 32 | 4 | ... | 6 | ... | 9 | 6 | 23 | 3 | 2 | 1 | 1 | 2 | 2 | 1 | .. | .. | 5 | .. | 71.28 | 28.72 | 50.80 | 49.20 | 19 6 | 21.2 |
| Ohio | 718 | 370 | 348 | 76 | 15 | 21 | 11 | 19 | ... | 1 | ... | 1 | 3 | 1 | 2 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 90.43 | 9.57 | 51.53 | 48.47 | 12 3 | 15.8 |
| Indiana, North | 624 | 300 | 324 | 78 | 18 | 23 | 13 | 11 | ... | 3 | ... | 1 | 4 | 1 | 2 | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 88.89 | 11.11 | 48.08 | 51.92 | 7.3 | 26.2 |
| " South | 505 | 273 | 232 | 34 | 7 | 17 | 3 | 2 | ... | 1 | ... | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 93.69 | 6.31 | 54.06 | 45.94 | | |
| Illinois, Joliet | 486 | 183 | 303 | 164 | 32 | 48 | 17 | 27 | 1 | 1 | 1 | 16 | 2 | 5 | 2 | .. | 6 | 1 | 1 | 2 | .. | 1 | .. | 1 | .. | 74.77 | 25.23 | 37.65 | 62.35 | 19.0 | 31.5 |
| " Chester | 312 | 145 | 167 | 27 | 4 | 11 | 1 | 1 | ... | 3 | ... | .. | 2 | 2 | 2 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 92.04 | 7.96 | 46.47 | 53.53 | | |
| Michigan | 319 | .... | .... | 147 | 18 | 21 | 17 | 58 | ... | 8 | ... | 6 | 2 | 2 | .. | 1 | 2 | 2 | 5 | 5 | .. | .. | .. | .. | .. | 68.45 | 31.55 | ..... | ..... | 23.7 | .... |
| Wisconsin | 151 | 54 | 97 | 60 | 11 | 20 | 8 | 6 | ... | 3 | ... | 6 | .. | 2 | .. | .. | 2 | .. | .. | 1 | 1 | .. | .. | .. | .. | 71.56 | 28.44 | 35.76 | 64.24 | 30 8 | 23.9 |
| Minnesota | 152 | 26 | 126 | 62 | 5 | 21 | 8 | 14 | ... | .. | ... | 14 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 71.03 | 28.97 | 17.11 | 82.89 | 34 3 | 41.1 |
| Missouri | 1,373 | 611 | 762 | 144 | 29 | 52 | 15 | 14 | ... | 4 | 2 | 9 | 4 | .. | 4 | 1 | 2 | 1 | 1 | 1 | 2 | .. | 2 | 6 | | 90.51 | 9.49 | 44.50 | 55.50 | 9 8 | 35.1 |
| Kansas | .... | .... | .... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | ..... | ..... | ..... | 11 1 | .... |
| Nebraska | 242 | 7 | 235 | 74 | 12 | 23 | 8 | 14 | ... | 2 | ... | 6 | .. | 1 | 3 | .. | .. | 2 | .. | 2 | .. | .. | .. | 1 | .. | 76.58 | 23.42 | 2.89 | 97.11 | 21.5 | 75.6 |
| Colorado | 302 | 7 | 295 | 103 | 24 | 14 | 19 | 14 | ... | 2 | 1 | 9 | 5 | 5 | .. | 1 | 5 | 1 | 1 | 1 | .. | .. | .. | .. | .. | 74.57 | 25.43 | 2.32 | 97.68 | 20 5 | 83.0 |
| Nevada | 66 | 6 | 60 | 33 | 8 | .. | 3 | 3 | 11 | .. | 2 | .. | 1 | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 66.67 | 33.33 | 9.09 | 90.90 | 41.2 | 62.6 |
| California, San Quentin | 826 | 305 | 521 | 551 | 78 | 56 | 53 | 38 | 173 | 15 | 42 | 13 | 17 | 20 | 9 | 1 | 6 | 2 | .. | 4 | .. | 1 | 11 | 13 | .. | 59.99 | 40.01 | 36.92 | 63.08 | 33.9 | 43.0 |
| " Folsom | 255 | 76 | 179 | 166 | 33 | 27 | 26 | 9 | 20 | 3 | 16 | 6 | 6 | 4 | 1 | 1 | 1 | 1 | 1 | .. | 1 | .. | 3 | 7 | .. | 60.57 | 39.43 | 29.80 | 70.20 | | |
| Maryland | 551 | 351 | 200 | 41 | 6 | 14 | 5 | 2 | ... | ... | ... | 1 | .. | 5 | .. | 3 | 2 | .. | .. | 2 | .. | 1 | .. | .. | .. | 93.07 | 6.93 | 63.70 | 36.30 | 8 9 | 10 5 |
| Virginia | 367 | 316 | 51 | 5 | 1 | 1 | .. | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | .. | .. | .. | .. | .. | .. | 98.66 | 1.34 | 86.10 | 13.90 | 1.0 | 3.5 |
| West Virginia | 114 | 51 | 63 | 2 | 1 | .. | 1 | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 98.28 | 1.72 | 44.74 | 55.26 | 3.0 | 33.8 |
| Tennessee | 1,338 | 859 | 479 | 25 | 3 | 5 | 4 | 4 | ... | 1 | ... | ... | 1 | .. | .. | 1 | .. | 1 | 1 | .. | 1 | .. | .. | 3 | .. | 98.17 | 1.83 | 64.20 | 35.80 | 1.1 | 13.9 |
| North Carolina | 523 | 440 | 83 | 5 | 2 | 1 | .. | .. | ... | ... | ... | ... | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 99.05 | .95 | 84.13 | 15.87 | .3 | 3.7 |
| South Carolina | 546 | 494 | 52 | ... | ... | .. | .. | .. | ... | ... | ... | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 100.00 | ..... | 90.48 | 9.52 | .8 | 3.7 |
| Alabama | .... | .... | .... | ... | ... | .. | .. | .. | ... | ... | ... | ... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | ..... | ..... | ..... | ..... | .8 | .... |
| Texas | 2,854 | 1,348 | 1,506 | 448 | 54 | 35 | 46 | 22 | ... | 6 | 251 | 3 | 6 | .. | 1 | 10 | 6 | 2 | 2 | 1 | .. | 1 | 2 | .. | | 86.44 | 13.56 | 47.23 | 52.77 | 7.2 | 39.8 |

Total: (1) 606. * From Scribner's Statistical Atlas.

cent of the foreign population, and in the three other states combined 60 85 per cent of it. In the middle states, again, there is a considerable difference between the percentages of foreign born in the population and in the prisons, due to the prominence of the Irish element. In California the Chinese, and in Texas the Mexicans, contribute largely to the prisons, and thus create the differences observed here between the percentages presented. In the southern states the foreign population is inappreciable. There remain, therefore, the states west of the Mississippi, where there is scarcely any perceptible difference between foreign and native born, or where, indeed, the native born make a worse showing. The latter include the states of Minnesota, Wisconsin, and Nevada. For the last named the reason is not clear, and because of the unsettled condition of the country, it is quite possible that the figures for 1880 do not represent the actual state of affairs today. In the northwest the predominance of the Scandinavian element among the foreign born explains the favorable showing of the latter. In Ohio also, and this seems to be an anomaly, there is a more favorable showing for the foreign born than for the native. The largest element of its foreign population is the German. The Germans have the same ratio to crime as the native born, according to the Tenth Census, and hence their presence should not affect the general result. It may be, however, that Ohio Germans are particularly law-abiding. If the ratios for the country at large are applicable to Ohio, we should have for 718 native-born prisoners 49 Germans, instead of which there are but 21.

There are data in a few reports which permit a glance at the percentage of prisoners. They are comprised in the small table below, with the necessary data for comparisons.

These figures show that in Massachusetts the native stock is less disposed to crime than that of foreign abstraction, even in the case of mixed parentage where the foreign stock has come into contact with our civilization. Unfortunately, the census contains no figures for Illinois. If what we have

| | Convicts. | | | | Population, 1880. | | |
|---|---|---|---|---|---|---|---|
| | Native. | Foreign. | Mixed. | Unknown. | Native. | Foreign. | Mixed. |
| Mass. Reformatory. Number | 127 | 388 | 73 | 18 | 902,354 | 798,652 | 82,079 |
| " " Per cent | 20.96 | 64.03 | 12.04 | 2.97 | 50.6 | 44.8 | 4.6 |
| Illinois, Joliet. Number..... | 280 | 307 | 51 | 9 | ..... | ..... | ..... |
| " " Per cent..... | 43.27 | 47.45 | 7.88 | 1.39 | ..... | ..... | ..... |
| Wisconsin. Number..... | 79 | 106 | 19 | 7 | 364,248 | 856,828 | 94,321 |
| " Per cent ..... | 37.44 | 50.24 | 9.00 | 3.32 | 27.7 | 65.1 | 7.2 |
| Minnesota. Number..... | 84 | 129 | 1 | .... | 222,469 | 507,670 | 50,634 |
| " Per cent..... | 39.25 | 60.28 | .47 | .... | 28.5 | 65.0 | 6.5 |

presented for Wisconsin and Minnesota represent the actual state of affairs, it shows badly for the native stock in comparison with the foreign, recruited largely from the law-abiding Scandinavians. On the other hand, the growth of those states in population has been very great since 1880, although all data are lacking to show whether the relative proportions of foreign and native elements may have been changed.

Inter-state emigration is one of the characteristic features of our population. In relation to crime it will readily be admitted that those who live in the state in which they are born are a more stable element of the community, and less apt to be drawn into crime, than those who, for one reason or another, have changed their habitation. This would seem to be fully corroborated by the figures of the table. Everywhere we find those born in other states much more strongly represented in the prisons than in the population generally. The figures would be striking indeed did we not remember that among those who are born in other states children and young people who do not contribute to the prisons are in vastly smaller proportions than among those born in the state. Even after making allowances for this fact the figures are not without meaning, and show a slight evil connected with the diffusion of the population throughout the country.

An examination of Table IV, relating to conjugal condi-

*Table IV.* CONJUGAL CONDITIONS.

| | Conjugal Condition. | | | | Per Cent. | | | |
|---|---|---|---|---|---|---|---|---|
| | Single. | Married. | Widowers and Widows. | Divorced. | Single. | Married. | Widowers and Widows. | Divorced. |
| Maine | .... | .... | ... | .. | .... | .... | .... | .... |
| New Hampshire | 68 | 47 | ... | .. | 59.13 | 40.87 | .... | .... |
| Vermont | 49 | 39 | 6 | .. | 52.13 | 41.49 | 6.38 | .... |
| Massachusetts | .... | .... | ... | .. | .... | .... | .... | .... |
| " Reformatory | .... | .... | ... | .. | .... | .... | .... | .... |
| Connecticut | .... | .... | ... | .. | .... | .... | .... | .... |
| New York, Sing Sing | .... | .... | ... | .. | .... | .... | .... | .... |
| " Auburn | 846 | 402 | ... | .. | 67.79 | 32.21 | .... | .... |
| " Clinton | .... | .... | ... | .. | .... | .... | .... | .... |
| Pennsylvania, Eastern | .... | .... | ... | .. | .... | .... | .... | .... |
| " Western | 163 | 93 | 10 | .. | 61.28 | 34.96 | 3.76 | .... |
| New Jersey | .... | .... | ... | .. | .... | .... | .... | .... |
| Ohio | 487 | 250 | 36 | 21 | 61.33 | 31.49 | 4.53 | 2.65 |
| Indiana, North | 487 | 215 | ... | .. | 69.37 | 30.63 | .... | .... |
| " South | 325 | 179 | 35 | .. | 60.30 | 33.21 | 6.49 | .... |
| Illinois, Joliet | .... | .... | ... | .. | .... | .... | .... | .... |
| " Chester | .... | .... | ... | .. | .... | .... | .... | .... |
| Michigan | 210 | 203 | 53 | .. | 45.06 | 43.56 | 11.38 | .... |
| Wisconsin | 63 | 139 | 7 | 2 | 29.86 | 65.88 | 3.32 | .94 |
| Minnesota | 156 | 52 | 6 | .. | 72.90 | 24.30 | 2.80 | .... |
| Missouri | 1,119 | 404 | ... | .. | 73.47 | 26.53 | .... | .... |
| Kansas | .... | .... | ... | .. | .... | .... | .... | .... |
| Nebraska | 218 | 98 | ... | .. | 68.99 | 31.01 | .... | .... |
| Colorado | 317 | 71 | 17 | .. | 78.27 | 17.53 | 4.20 | .... |
| Nevada | 79 | 14 | 6 | .. | 79.80 | 14.14 | 6.06 | .... |
| California, San Quentin | 1,066 | 268 | 43 | .. | 77.42 | 19.46 | 3.12 | .... |
| " Folsom | .... | .... | ... | .. | .... | .... | .... | .... |
| Maryland | 412 | 162 | 18 | .. | 69.59 | 27.36 | 3.05 | .... |
| Virginia | 267 | 105 | ... | .. | 71.77 | 28.23 | .... | .... |
| West Virginia | .... | .... | ... | .. | .... | .... | .... | .... |
| Tennessee | 811 | 487 | 65 | .. | 59.50 | 35.73 | 4.77 | .... |
| North Carolina | 315 | 188 | 24 | 1 | 59.06 | 35.61 | 4.55 | .18 |
| South Carolina | .... | .... | ... | .. | .... | .... | .... | .... |
| Alabama | .... | .... | ... | .. | .... | .... | .... | .... |
| Texas | 2,025 | 1,146 | 131 | .. | 61.32 | 34.71 | 3.97 | .... |

tion, gives us a slight glimpse of the home life of the convict. We find throughout a very large percentage of unmarried. Undoubtedly, the temptations peculiar to married life are small in comparison with its safe-guards, and hence we need not be surprised to find a relatively small percentage of

married persons among criminals. On the other hand, the life which the criminal leads would hardly be favorable to marriage, and this influence would, unquestionably, operate with the restraints of the married state to make the percentage of married among the convicts small. In general, it may be said that the number of unmarried convicts averages highest in the states of the far West, a fact explained by the greater difficulty of contracting marriage when the male element so strongly predominates. Thus, in Colorado, where the percentage of unmarried convicts is very high, there were, in 1880, 2.74 men of the age of twenty years and upward to every woman of the same age. In the settled states of the East we find conditions among the convicts closely approaching those observed in Europe.

Feeling the importance of the home relations of the convicts as throwing light upon the incentives to crime, some of the reports descend more into particulars. Thus, in Joliet it was found that among 650 convicts eight had left their homes before the age of 5, 35 between the ages of 5 and 10, 136 between 10 and 15, 468 after 15, and three had never known home. Of similar importance is it to know the degree of parental restraint, partially indicated by ascertaining the number of orphans. On this point a few figures can be presented.

| | Number. | | | | | Per Cent. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Both Parents Living. | Both Parents Dead. | Mother Living. | Father Living. | Unknown. | Both Parents Living. | Both Parents Dead. | Mother Living. | Father Living. | Unknown. |
| Illinois, Joliet | 233 | 184 | 151 | 76 | 6 | 35.85 | 28.31 | 23.23 | 11.69 | .92 |
| Michigan | 135 | 181 | 100 | 50 | | 28.97 | 38.84 | 21.46 | 10.73 | |
| California, San Quentin | 449 | 286 | 165 | 189 | 288 | 32.61 | 20.77 | 11.98 | 13.72 | 20.92 |
| *Same when convicts were 16 years of age.* | | | | | | | | | | |
| Eastern Pennsylvania | 323 | 42 | 83 | 62 | | 63.33 | 8.24 | 16.27 | 12.16 | |
| Western " | 171 | 14 | 57 | 24 | | 64.29 | 5.26 | 21.43 | 9.02 | |

We find from the above a very large number of cases where the parents are no longer living to exercise any restraint upon the vicious propensities of their offspring. But, as early training counts for so much, the plan of enumeration adopted in the Pennsylvania institutions is much superior to asking whether the parents of convicts are alive or dead at the time of conviction. In Pennsylvania we find a large proportion of orphans and half orphans.

Occupation is not without its influence upon crime, inasmuch as persons are more exposed to temptation in some callings than in others. A study of the data relating to employment cannot fail to bring out some interesting facts. Agriculture is generally believed to be conducive to virtue, and it undoubtedly presents few opportunities for crime. Hence we may not be surprised to see its proportion low. On the other hand, there is difficulty in separating agricultural laborers from laborers not specified, the latter being included under personal services. This caused some inaccuracies in the census, and in the prison reports no attempt even to make the distinction appears. In the lists of occupations agricultural laborers do not appear. What a large proportion of those included under professional and personal services is made up of laborers can be seen from the table under special classes. Trade and transportation furnish more than their share of criminals, except in the Massachusetts Reformatory, in Missouri, Nebraska, Nevada, California, Virginia, North Carolina, and Texas. The Massachusetts Reformatory deals with offenders of a more or less special class, and a large number are too young to have any occupation. The other exceptions are in the West and South, and the fact can only be explained by supposing for those engaged in these pursuits a much higher degree of mental and moral development than the great mass of the population. As to the last class, those engaged in manufacturing, mechanical, and mining occupations, their greater opportunities lead them into a greater proportion of crime than their

*Table V.* OCCUPATION.

| | Occupation. | | | | | | Special Classes. | | | | | | | | | Occupations. Per Cent. | | | | | | Occupations in Populat'n in 1880. Per Cent.* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Agriculture. | Professional and Personal. | Trade and Transportation. | Manufacturing, Mechanical & Mining. | Criminal. | None. | Laborers. | Barbers. | Waiters. | Saloon and Bar-keepers. | Clerks and Book-keepers. | Teamsters. | Butchers. | Painters. | Shoemakers. | Agriculture. | Professional and Personal. | Trade and Transportation. | Manufacturing, Mechanical & Mining. | Criminal. | None. | Agriculture. | Professional and Personal. | Trade and Transportation. | Manufacturing, Mech. & Mining. |
| Maine | .... | .... | .... | .... | .. | .... | .... | .. | .. | .. | .. | .... | .. | .. | .... | .... | .... | .... | .... | .. | .... | .. | .. | .. | .. |
| New Hampshire | .... | .... | .... | .... | .. | .... | .... | .. | .. | .. | .. | .... | .. | .. | .... | .... | .... | .... | .... | .. | .... | .. | .. | .. | .. |
| Vermont | .... | .... | .... | .... | .. | .... | .... | .. | .. | .. | .. | .... | .. | .. | .... | .... | .... | .... | .... | .. | .... | .. | .. | .. | .. |
| Massachusetts | .... | .... | .... | .... | .. | .... | .... | .. | .. | .. | .. | .... | .. | .. | .... | .... | .... | .... | .... | .. | .... | .. | .. | .. | .. |
| " Reformatory (1) | 21 | 138 | 64 | 272 | .. | 111 | 95 | 5 | 8 | 3 | 15 | 17 | 2 | 12 | 56 | 3.47 | 22.77 | 10 56 | 44.88 | .. | 18.32 | 9 | 24 | 16 | 51 |
| Connecticut | .... | .... | .... | .... | .. | .... | .... | .. | .. | .. | .. | .... | .. | .. | .... | .... | .... | .... | .... | .. | .... | .. | .. | .. | .. |
| New York, Sing Sing | 31 | 482 | 361 | 598 | 10 | 13 | 276 | 16 | 60 | 23 | 60 | 118 | 28 | 31 | 30 | 2.21 | 34.31 | 25.69 | 36.16 | .71 | .92 | | | | |
| " Auburn | 85 | 498 | 243 | 416 | .. | 6 | 362 | 32 | 43 | 9 | 52 | 65 | 19 | 44 | 49 | 6.81 | 39.91 | 19.47 | 33.33 | .. | .48 | 20 | 29 | 18 | 33 |
| " Clinton (2) | 21 | 98 | 43 | 70 | .. | .... | 72 | 5 | 8 | .. | 10 | 5 | 2 | 8 | 7 | 9.05 | 42.24 | 18.54 | 30.17 | .. | .... | | | | |
| Pennsylvania, Eastern | .... | .... | .... | .... | .. | .... | .... | .. | .. | .. | .. | .... | .. | .. | .... | .... | .... | .... | .... | .. | .... | | | | |
| " Western | 2 | 111 | 33 | 118 | .. | 2 | 96 | 8 | 4 | 6 | 14 | 2 | 3 | 1 | 2 | .75 | 41.73 | 12.41 | 44.36 | .. | .75 | 21 | 31 | 12 | 36 |
| New Jersey | .... | .... | .... | .... | .. | .... | .... | .. | .. | .. | .. | .... | .. | .. | .... | .... | .... | .... | .... | .. | .... | .. | .. | .. | .. |
| Ohio | 55 | 368 | 165 | 206 | .. | .... | 245 | 29 | 14 | 7 | 38 | 31 | 4 | 38 | 9 | 6.93 | 46.35 | 20.78 | 25.94 | .. | .... | 40 | 25 | 10 | 25 |
| Indiana, North | .... | .... | .... | .... | .. | .... | .... | .. | .. | .. | .. | .... | .. | .. | .... | .... | .... | .... | .... | .. | .... | | | | |
| " South | 81 | 226 | 53 | 159 | .. | 20 | 184 | 10 | 5 | 3 | 8 | 10 | 5 | 22 | 19 | 15.03 | 41.93 | 9.83 | 29.50 | .. | 3.71 | 52 | 22 | 9 | 17 |
| Illinois, Joliet (3) | 87 | 229 | 152 | 176 | .. | 16 | 124 | 8 | 23 | 7 | 44 | 30 | 10 | 15 | 16 | 13 18 | 34.69 | 23.03 | 26.67 | .. | 2.43 | | | | |
| " Chester | 136 | 96 | 39 | 66 | .. | 3 | 62 | 5 | 4 | .. | 5 | 7 | 2 | 4 | 6 | 40.00 | 28.24 | 11.47 | 19.41 | .. | .88 | 44 | 23 | 13 | 20 |
| Michigan (4) | 78 | 151 | 102 | 136 | .. | .... | 116 | 8 | 6 | 14 | 10 | 35 | 5 | 17 | 15 | 16.70 | 32.33 | 21.84 | 29.13 | .. | .... | 42 | 25 | 10 | 23 |
| Wisconsin | 20 | 97 | 37 | 57 | .. | .... | 73 | 3 | 1 | 3 | 4 | 4 | .. | 12 | 4 | 9.48 | 45.97 | 17.54 | 27.01 | .. | .... | 47 | 23 | 9 | 21 |
| Minnesota | 5 | 103 | 42 | 62 | .. | 2 | 66 | 10 | .. | 4 | 9 | 15 | 2 | 32 | 8 | 2.34 | 48.13 | 19.63 | 28.97 | .. | .93 | 52 | 23 | 10 | 15 |
| Missouri (5) | 287 | 622 | 168 | 446 | 1 | .... | 415 | 30 | 29 | 3 | 41 | 67 | 16 | 22 | 108 | 18.83 | 40.82 | 11.02 | 29.26 | .07 | .... | 51 | 21 | 12 | 16 |
| Kansas | .... | .... | .... | .... | .. | .... | .... | .. | .. | .. | .. | .... | .. | .. | .... | .... | .... | .... | .... | .. | .... | .. | .. | .. | .. |
| Nebraska | 89 | 78 | 31 | 84 | .. | 34 | 38 | 8 | .. | 7 | 9 | 5 | 4 | 6 | 3 | 28.16 | 24.68 | 9.81 | 26.58 | .. | 10.77 | 59 | 19 | 10 | 12 |
| Colorado | 53 | 209 | 53 | 130 | .. | 1 | 134 | 8 | 21 | 5 | 13 | 11 | 3 | 10 | 13 | 13.09 | 35.31 | 18.27 | 33.33 | .. | .... | 13 | 25 | 15 | 47 |
| Nevada | 14 | 39 | 10 | 25 | .. | 11 | 28 | 1 | .. | 1 | .. | 4 | 1 | 2 | .... | 14.14 | 39.40 | 10.10 | 25.25 | .. | 11.11 | 13 | 32 | 14 | 41 |
| California, San Quentin | 101 | 704 | 195 | 377 | .. | .... | 388 | 27 | 30 | 10 | 35 | 42 | 16 | 15 | 31 | 7.33 | 51.13 | 14.16 | 27.38 | .. | .... | | | | |
| " Folsom | 28 | 209 | 53 | 130 | .. | 1 | 134 | 8 | 21 | 5 | 13 | 11 | 3 | 10 | 13 | 6.65 | 49 64 | 12.59 | 30.88 | .. | .24 | 21 | 32 | 15 | 32 |
| Maryland | 93 | 298 | 104 | 90 | .. | 7 | 169 | 9 | 34 | 8 | 14 | 7 | 4 | 8 | 14 | 15.71 | 50.34 | 17.57 | 15.20 | .. | 1.18 | 28 | 31 | 15 | 26 |
| Virginia | 48 | 283 | 11 | 30 | .. | .... | 255 | 4 | 1 | .. | 2 | .... | 3 | 3 | 6 | 12.90 | 76.08 | 2.96 | 8.06 | .. | .... | 51 | 30 | 6 | 13 |
| West Virginia | .... | .... | .... | .... | .. | .... | .... | .. | .. | .. | .. | .... | .. | .. | .... | .... | .... | .... | .... | .. | .... | .. | .. | .. | .. |
| Tennessee (6) | 347 | 781 | 68 | 147 | .. | .... | 730 | 10 | .. | 4 | 9 | 15 | 2 | 32 | 8 | 25.84 | 58.15 | 5.06 | 10.95 | .. | .... | 66 | 21 | 5 | 8 |
| North Carolina | 2 | 486 | 7 | 31 | .. | 2 | 456 | 2 | 8 | .. | 2 | .... | .. | 3 | 3 | .38 | 92.05 | 1.32 | 5.87 | .. | .38 | 75 | 14 | 3 | 8 |
| South Carolina | 362 | 127 | 31 | 26 | .. | .... | 89 | 1 | 18 | .. | 2 | .... | 1 | 4 | .... | 66.30 | 23.26 | 5.68 | 4.76 | .. | .... | 75 | 16 | 4 | 5 |
| Alabama | 254 | 330 | 67 | 72 | 2 | 6 | 260 | 3 | 3 | 2 | 2 | 4 | 4 | 4 | 3 | 34.32 | 45.81 | 9.05 | 9.73 | .27 | .82 | 77 | 16 | 3 | 4 |
| Texas | 6 | 199 | 97 | 271 | .. | 2729 | .... | 51 | .. | 12 | 17 | .... | 16 | 31 | 16 | .18 | 6.03 | 2.94 | 8.21 | .. | 82.64 | 69 | 19 | 7 | 5 |

Totals.—(1) 666. (2) 232. (3) 660. (4) 467. (5) 1,524. (6) 1.343. * From Scribner's Statistical Atlas.

number would lead us to expect. Exceptions to the rule are found again in the Massachusetts Reformatory, in Colorado, Nevada, California, and in all the southern states, except Tennessee, Alabama, and Texas. As for the Reformatory and the southern states, the explanations given above apply here also, while in the West it is probable that many engaged in mining have been classed as "laborers."

Certain special occupations, which for one reason or another are supposed to contribute largely to the criminal population, have been introduced into Table V. It would lead us too far from the main topic to pursue further this branch of the inquiry.

Certain states give a few figures upon apprenticeship. It seems to us that they are unduly emphasized, and show rather the decadence of the apprentice system than anything else. The data are subjoined.

| | Number. | | | | Per Cent. | | | |
|---|---|---|---|---|---|---|---|---|
| | Unapprenticed. | Apprenticed and Left. | Apprenticed and Served. | Acquired Trade without Apprenticeship. | Unapprenticed. | Apprenticed and Left. | Apprenticed and Served. | Acquired Trade without Apprenticeship. |
| Eastern Pennsylvania | 401 | 7 | 56 | 46 | 78.63 | 1.37 | 10.98 | 9.02 |
| Western " | 201 | 1 | 28 | 36 | 75.56 | .38 | 10.53 | 13.53 |
| Maryland ..... | 559 | 17 | 16 | .. | 94.43 | 2.87 | 2.70 | .... |

Besides the general matters thus far treated certain special data have been collected in some of the reports. Thus, there are generally returns upon the educational status of prisoners and some of their habits.

Unfortunately, statistics are able only to grasp a certain minimum of education to determine the amount of illiteracy, but cannot go much beyond this. Our figures in Table VI show us plainly that the illiterate classes furnish much more than their proportion of the criminal classes. Throughout the percentage of those who can neither read nor write is much larger in prisons than in the population at large.

*Table VI.* EDUCATION AND HABITS.

| | Education. | | | Per Cent. | | | Use of Liquor. | | | Per Cent. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Read and Write. | Read Only. | Neither. | Read and Write. | Read Only. | Neither. | Temperate. | Moderate. | Intemperate. | Temperate. | Moderate. | Intemperate. |
| Maine | .... | .. | ... | ..... | ..... | ..... | ..... | ... | ..... | ..... | ..... | ..... |
| New Hampshire | 101 | 3 | 11 | 87.83 | 2.61 | 9.56 | 39 | ... | 76 | 33.91 | ..... | 66.09 |
| Vermont | 81 | 3 | 10 | 86.17 | 3.19 | 10.64 | 57 | ... | 37 | 60.64 | ..... | 49.36 |
| Massachusetts | .... | .. | ... | ..... | ..... | ..... | ..... | ... | ..... | ..... | ..... | ..... |
| " Reformatory (1) | 514 | 40 | 52 | 84.82 | 6.60 | 8.58 | ..... | ... | ..... | ..... | ..... | ..... |
| Connecticut (2) | 266 | 15 | 27 | 86.36 | 4.87 | 8.77 | ..... | ... | ..... | ..... | ..... | ..... |
| New York, Sing Sing | 1,290 | 5 | 110 | 91.81 | .36 | 7.83 | 188 | ... | 1,217 | 13.38 | ..... | 86.62 |
| " Auburn | 1,020 | 97 | 131 | 81.73 | 7.77 | 10.50 | 384 | 230 | 634 | 30.77 | 18.43 | 50.80 |
| " Clinton | 191 | 15 | 27 | 81.97 | 6.44 | 11.59 | 52 | 90 | 91 | 22.32 | 38.63 | 39.05 |
| Pennsylvania, Eastern | 430 | 80 | | 84.31 | 15.69 | | 121 | 232 | 157 | 23.73 | 45.49 | 30.78 |
| " Western | 200 | 43 | 23 | 75.19 | 16.16 | 8.65 | 24 | 107 | 131 | 12.78 | 36.47 | 50.75 |
| New Jersey | 701 | 47 | 133 | 79.57 | 5.33 | 15.10 | ..... | ... | ..... | ..... | ..... | ..... |
| Ohio | 628 | 76 | 90 | 79.09 | 9.57 | 11.34 | 238 | ... | 556 | 29.97 | ..... | 70.03 |
| Indiana, North | 602 | 32 | 68 | 85.75 | 4.56 | 9.69 | 120 | ... | 582 | 17.09 | ..... | 82.91 |
| " South | 373 | 35 | 13 | 69.20 | 6.49 | 24.31 | 171 | 243 | 125 | 31.73 | 45.08 | 23.19 |
| Illinois, Joliet | 522 | 71 | 57 | 80.31 | 10.92 | 8.77 | 194 | 301 | 155 | 29.84 | 46.31 | 23.85 |
| " Chester | 255 | 16 | 69 | 76.00 | 4.71 | 20.29 | 51 | 223 | 66 | 15.00 | 65.59 | 19.41 |
| Michigan | 393 | 16 | 57 | 84.33 | 3.43 | 12.24 | 119 | 90 | 257 | 25.54 | 19.31 | 55.15 |
| Wisconsin | 190 | 5 | 16 | 90.05 | 2.37 | 7.58 | 35 | 106 | 70 | 16.59 | 50.24 | 33.17 |
| Minnesota | 196 | 5 | 13 | 91.59 | 2.34 | 6.07 | 89 | 22 | 103 | 41.59 | 10.28 | 48.13 |
| Missouri | 1,137 | 98 | 288 | 74.66 | 6.43 | 18.91 | 889 | ... | 634 | 58.37 | ..... | 41.63 |
| Kansas | 790 | 79 | 60 | 85.04 | 8.50 | 6.46 | ..... | ... | ..... | ..... | ..... | ..... |
| Nebraska | 189 | 127 | | 59.81 | 40.19 | | 122 | 70 | 124 | 38.61 | 22 15 | 39.24 |
| Colorado | 363 | 14 | 28 | 89.63 | 3.46 | 6.91 | 123 | ... | 282 | 30.37 | ..... | 69.63 |
| Nevada | 84 | 3 | 12 | 84.85 | 3.03 | 12.12 | 28 | 64 | 7 | 28.28 | 64 65 | 7.07 |
| California, San Quentin | 1,100 | 59 | 218 | 79.88 | 4.28 | 15 84 | 80 | 50 | 647 | 49.38 | 3.63 | 46.99 |
| " Folsom | 359 | 11 | 51 | 85.27 | 2.61 | 12.12 | ..... | .. | ..... | ..... | ..... | ..... |
| Maryland | 372 | 37 | 183 | 62.84 | 6.25 | 30.91 | 111 | 305 | 176 | 18.75 | 51.52 | 29.73 |
| Virginia | 159 | 26 | 187 | 42.74 | 6.99 | 50.27 | 150 | 123 | 99 | 40.32 | 33.06 | 26.62 |
| West Virginia | 61 | 55 | | 52.59 | 47.41 | | ..... | ... | ..... | ..... | ..... | ..... |
| Tennessee | .... | .. | 936 | ..... | ..... | ..... | ..... | ... | ..... | ..... | ..... | ..... |
| North Carolina | 131 | 30 | 358 | 24.81 | 7.00 | 67.80 | ..... | ... | ..... | ..... | ..... | ..... |
| South Carolina | .... | .. | ... | ..... | ..... | ..... | ..... | ... | ..... | ..... | ..... | ..... |
| Alabama | .... | .. | ... | ..... | ..... | ..... | ..... | ... | ..... | ..... | ..... | ..... |
| Texas | 1,242 | 2000 | | 37.61 | 62.39 | | 1,200 | ... | 2,042 | 38.16 | ..... | 61.84 |

Totals.—(1) 606. (2) 315 on June 15, 1888.

NOTE. The classification respecting the use of liquors varies. An attempt has been made to assimilate the data to those used above. Where there is no entry under Moderate, it is to be understood that the classification Temperate and Intemperate is used. In New York, Sing Sing, "Use liquors and do not use" are considered equivalent to these. Virginia uses "Abstinent" instead of Temperate. Pennsylvania and Maryland use "Abstinent," and distinguish Intemperate and Occasionally Intemperate, and the sum of the latter two figures is included under Intemperate in the above table. In California, San Quentin, 600, or 43.57 per cent, of the prison population are classed as Opium Eaters.

Some measure of the attainments of the rest may be found in the fact of the very large proportion who can read and not write, as compared with the same category in the population generally. As for those who can both read and write, a statistical measure of their capacity is lacking. It would be well if all the reports contained figures, giving the number of years of school attendance, as is the case at Joliet.

The following figures show how little education has been enjoyed by the convicts in this latter institution: —

| | | | |
|---|---|---|---|
| Did not attend school, | 59 | Attended 5 years, | 77 |
| Attended 1 year or less, | 65 | " 6 " | 35 |
| " 2 years, | 76 | " 6 " and more, | 80 |
| " 3 " | 140 | | |
| " 4 " | 118 | Total, | 650 |

The relation of temperance to crime has been discussed at such length that it is not surprising to find data upon the subject. And yet, with varying conceptions of what is to be understood under intemperance, no subject needs more delicate treatment. It is evident that the value of data collected under this head must depend entirely upon the care which is expended upon their collection. Where, as in Philadelphia, a system of individual treatment is pursued, the figures may be considered as accurate. Indeed, the figures for Philadelphia for a series of years, as follows, show the regularity which is strong presumption of their correctness.

| Year. | Total. | Number. | | | | Per Cent. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Abstainers. | Moderate. | Occasionally Temperate. | Intemperate. | Abstainers. | Moderate. | Occasionally Intemperate. | Intemperate. |
| 1883 | 490 | 95 | 233 | 157 | 5 | 19.39 | 47.55 | 32.04 | 1.02 |
| 1884 | 479 | 74 | 198 | 199 | 8 | 15.45 | 41.34 | 41.14 | 1.67 |
| 1885 | 564 | 98 | 249 | 215 | 2 | 17.38 | 44.15 | 38.12 | .35 |
| 1886 | 552 | 97 | 262 | 192 | 1 | 17.57 | 47.47 | 34.78 | .18 |
| 1887 | 560 | 113 | 247 | 189 | 11 | 20.18 | 44.11 | 33.75 | 1.96 |
| 1888 | 510 | 121 | 232 | 154 | 3 | 23.72 | 45.49 | 30.20 | .59 |

Elsewhere, even in well-ordered prisons, such as those of Illinois, we do not observe the same regularity, as appears from the following percentages: —

| Year. | Joliet. | | | Chester. | | |
|---|---|---|---|---|---|---|
| | Temperate. | Moderate. | Intemperate. | Abstinent. | Moderate. | Intemperate. |
| 1885 | 13.46 | 71.24 | 15.30 | ..... | ..... | ..... |
| 1886 | 28.00 | 38.02 | 33.98 | 23.28 | 61.38 | 15.34 |
| 1887 | 23.20 | 43.89 | 32.91 | 18.41 | 56.32 | 25.27 |
| 1888 | 29.84 | 46.31 | 23.85 | 15.00 | 65.59 | 19.41 |

In the above figures we have an apt illustration of the contingencies upon which these data depend, as the year 1886 marked the advent of a new chaplain at Joliet. If we needed further proof of the unreliability of these figures, we have only to note in our table the great differences in the figures for separate prisons in the same state. Whereas, no one will deny the relation of intemperance to crime, the statistician must examine carefully the value of the data presented. It is also a matter of regret that there are no means of comparing the data for prisons with the facts for the population.

The habits of the convicts in regard to tobacco are subjects of inquiry in some reports. It will surely surprise no one that tobacco habits are largely prevalent among criminals; nor will anyone be inclined to draw conclusions from the fact.

USE OF TOBACCO.

| | Number. | | Per Cent. | |
|---|---|---|---|---|
| | Users. | Non-Users. | Users. | Non-Users. |
| New York, Sing Sing | 1,355 | 50 | 96.44 | 3.56 |
| " Clinton | 219 | 14 | 93.99 | 6.01 |
| Ohio | 637 | 157 | 80.23 | 19.77 |
| Minnesota | 202 | 12 | 94.39 | 5.61 |
| Colorado | 376 | 29 | 92.84 | 7.16 |
| Texas | 2,635 | 667 | 79.89 | 20.20 |

Some few reports occupy themselves with the religious belief of the convicts, and generally under this heading.

In Ohio the church of the parents is given, and in Wisconsin the religious instruction. Among the data given in Table VII we note that the category of those having no religious belief is in some cases very large, as in Missouri, Tennessee, and Illinois, whereas elsewhere it does not appear at all. The percentage of Catholic is quite high, and would, undoubtedly, be high in comparison with figures for the population, if we possessed such. This is caused in large part by the nationality and economic condition of those adhering to this faith. Not less striking is the small number of Hebrews, although it is generally known that they furnish a relatively small contingent to the prisons.

It is of equal importance to know how far religious training is disseminated, which some reports show by giving the attendance at Sunday Schools as follows: —

| | Number. | | Per Cent. | |
|---|---|---|---|---|
| | Attended. | Did not Attend. | Attended. | Did not Attend. |
| Ohio | 654 | 140 | 82.37 | 17.63 |
| Illinois, Joliet | 507 | 143 | 78.00 | 22.00 |
| California, San Quentin | 1007 | 370 | 73.13 | 26.87 |
| Maryland | 325 | 267 | 54.90 | 45.10 |

Turning now from the criminals to the crimes which they have committed, we experience some difficulty in obtaining an appropriate classification. Although found in none of the reports, that adopted by the United States Census seemed the most scientific, and has been used here. In the reports the usual classification is Crimes against the Person, and Crimes against Property. In such cases much that falls under Crimes against Society is classed with Crimes against the Person. In Table VIII a few considerations attach to the larger groups. The relation of crimes against the person to those against property afford a curious study. Even in parts of the country not far distant from each other, as, for in-

*Table VII.* RELIGIOUS BELIEF.

| | Religious Belief. | | | | | Protestants. | | | | | | | | | | | | | | Religious Belief. Per Cent. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Catholic. | Protestant. | Jewish. | Unclassified. | None. | Adventist. | Baptist. | Campbellite. | Christian. | Congregational. | Disciples. | Episcopal. | Friends. | Lutherans. | Methodists. | Presbyterian. | United Brethren. | Universalist. | Others. | Catholic. | Protestant. | Jewish. | Unclassified. | None. |
| New Hampshire | 51 | 64 | .. | ... | .... | .. | ... | .. | .. | .. | .. | .. | .. | .. | ... | .. | .. | .. | .. | 44.35 | 55.65 | .. | .... | .... |
| Vermont | 26 | 68 | .. | ... | .... | .. | ... | .. | .. | .. | .. | .. | .. | .. | ... | .. | .. | .. | .. | 27.66 | 72.34 | .. | .... | .... |
| Pennsylvania, Western | 86 | 160 | .. | 10 | 10 | .. | 16 | .. | .. | .. | .. | 8 | .. | 27 | 79 | 30 | .. | .. | .. | 32.33 | 60.15 | .. | 3.76 | 3.76 |
| Ohio | 185 | 527 | 4 | 1 | 77 | 3 | 113 | .. | 14 | 20 | 18 | 8 | 3 | 29 | 235 | 50 | 13 | 2 | 19 | 23.30 | 66.37 | .51 | .13 | 9.69 |
| Illinois, Joliet | 133 | 69 | .. | ... | 448 | .. | 5 | 1 | 2 | .. | .. | 17 | .. | 26 | 14 | 3 | 1 | .. | .. | 20.46 | 10.62 | .. | .... | 68.92 |
| " Chester | 49 | 112 | .. | 1 | 78 | .. | 65 | .. | 16 | .. | .. | 2 | .. | 8 | 92 | 19 | 2 | .. | 7 | 20.42 | 46.67 | .. | .42 | 32.49 |
| Wisconsin | 83 | 81 | .. | ... | 47 | .. | ... | .. | .. | .. | .. | .. | .. | .. | ... | .. | .. | .. | .. | 39.34 | 38.39 | .. | .... | 22.27 |
| Minnesota | 90 | 119 | 1 | ... | 4 | .. | ... | .. | .. | .. | .. | .. | .. | .. | ... | .. | .. | .. | .. | 42.06 | 55.61 | .47 | .... | 1.86 |
| Missouri | 253 | 217 | 4 | ... | 1,049 | .. | 51 | 4 | 14 | .. | .. | 12 | .. | 29 | 67 | 21 | .. | .. | 19 | 16.61 | 14.25 | .26 | .... | 68.88 |
| Nebraska | 74 | 118 | 2 | ... | 122 | .. | 12 | .. | 8 | 3 | .. | 5 | 1 | 19 | 33 | 10 | 1 | .. | 26 | 23.42 | 37.34 | .63 | .... | 38.60 |
| California, San Quentin | 591 | 399 | 12 | 180 | 195 | .. | 51 | .. | .. | .. | .. | 76 | .. | 63 | 81 | 71 | .. | 57 | .. | 42.92 | 28.98 | .87 | 13.07 | 14.16 |
| Tennessee | 27 | 203 | 5 | ... | 1,128 | 1 | 119 | .. | 9 | .. | .. | 2 | .. | .. | 61 | 9 | 1 | .. | .. | 1.98 | 14.89 | .37 | .... | 82.76 |

*Table VIII.* NATURE OF CRIME.

| | Crimes. | | | | | | | | | Percentages. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Against Gov'nt. | | Against Society. | | | | | Against the Person. | Against Property. | Against Gov'nt. | | Against Society. | | | | | Against the Person. | Against Property. |
| | Its Existence. | Its Operations. | Public Health. | Public Justice. | Public Morals. | Public Peace. | Public Policy. | | | Its Existence. | Its Operations. | Public Health. | Public Justice. | Public Morals. | Public Peace. | Public Policy. | | |
| Maine* | .. | 1 | .. | 1 | 2 | ... | 3 | 55 | 88 | .. | .66 | .... | .66 | 1.32 | .... | 1.97 | 36.18 | 57.89 |
| New Hampshire | .. | .. | .. | 1 | 9 | ... | 4 | 25 | 76 | .. | .... | .... | .87 | 7.83 | .... | 3.48 | 21.74 | 66.08 |
| Vermont | .. | .. | 1 | 4 | 6 | ... | 2 | 21 | 60 | .. | .... | 1.06 | 4.26 | 6.38 | .... | 2.13 | 22 34 | 63.83 |
| Massachusetts | .. | 1 | .. | 1 | 4 | ... | .. | 25 | 129 | .. | .63 | .... | .62 | 2.50 | .... | .... | 15.63 | 80.62 |
| " Reformatory (1) | .. | 3 | .. | .. | 264 | 127 | .. | 27 | 251 | .. | .45 | .... | .... | 39.29 | 18.90 | .... | 4.02 | 37.34 |
| Connecticut | .. | 3 | .. | 3 | 8 | ... | 16 | 91 | 179 | .. | 1.00 | .... | 1.00 | 2.67 | .... | 5.33 | 30.33 | 59.67 |
| New York, Sing Sing | .. | 3 | .. | 4 | 19 | 8 | 3 | 276 | 1,092 | .. | .21 | .... | .29 | 1.35 | .57 | .21 | 19.65 | 77.72 |
| " Auburn (3) | .. | 8 | .. | 16 | 25 | 1 | .. | 302 | 1,006 | .. | .59 | .... | 1.18 | 1.84 | .57 | .... | 22.24 | 74.08 |
| " Clinton | .. | .. | .. | 2 | 7 | 1 | .. | 45 | 178 | .. | .... | .... | .86 | 3.00 | .43 | .... | 19.31 | 76.40 |
| Pennsylvania, Eastern | .. | 10 | .. | .. | 19 | 1 | 22 | 99 | 359 | .. | 1.96 | .... | .... | 3.73 | .20 | 4.31 | 19.41 | 70.39 |
| " Western | .. | 17 | .. | 5 | 9 | ... | 1 | 70 | 164 | .. | 6.39 | .... | 1.88 | 3.38 | .... | .38 | 26.32 | 61.65 |
| New Jersey | .. | 16 | .. | 15 | 27 | ... | .. | 293 | 530 | .. | 1.82 | .... | 1.70 | 3.06 | .... | .... | 33.26 | 60.16 |
| Ohio | .. | .. | .. | .. | .. | ... | .. | .. | .. | .. | .... | .... | .... | .... | .... | .... | .... | .... |
| Indiana, North | .. | 13 | .. | 2 | 13 | ... | .. | 162 | 512 | .. | 1.85 | .... | .28 | 1.85 | .... | .... | 23.08 | 72.94 |
| " South | .. | 2 | 1 | 1 | 8 | ... | .. | 181 | 346 | .. | .37 | .19 | .19 | 1.48 | .... | .... | 33.58 | 64.19 |
| Illinois, Joliet | .. | 8 | .. | 5 | 12 | ... | .. | 111 | 514 | .. | 1.23 | .... | .77 | 1.85 | .... | .... | 17.08 | 79.07 |
| " Chester | .. | 19 | .. | 4 | 4 | ... | .. | 63 | 250 | .. | 5.59 | .... | 1.18 | 1.18 | .... | .... | 18.53 | 73.52 |
| Michigan | .. | 1 | .. | 3 | 31 | ... | .. | 138 | 173 | .. | .29 | .... | .87 | 8.95 | .... | .... | 39.88 | 50.00 |
| Wisconsin | .. | .. | .. | 2 | 7 | ... | .. | 48 | 154 | .. | .... | .... | .95 | 3.32 | .... | .... | 22.75 | 72.98 |
| Minnesota | .. | .. | .. | 1 | 6 | ... | .. | 34 | 173 | .. | .... | .... | .47 | 2.80 | .... | .... | 15.89 | 80.84 |
| Missouri | .. | 23 | .. | 17 | 28 | ... | .. | 270 | 1,185 | .. | 1.51 | .... | 1 12 | 1.84 | .... | .... | 17.73 | 77.80 |
| Kansas (2) | .. | 3 | .. | 8 | 27 | ... | .. | 214 | 635 | .. | .34 | .... | .90 | 3.04 | .... | .... | 24.13 | 71.59 |
| Nebraska | .. | 3 | .. | .. | 3 | ... | .. | 57 | 253 | .. | .95 | .... | .... | .95 | .... | .... | 18.04 | 80.06 |
| Colorado | .. | .. | .. | .. | .. | ... | .. | .. | .. | .. | .... | .... | .... | .... | .... | .... | .... | .... |
| Nevada | .. | .. | .. | 1 | 11 | ... | .. | 48 | 39 | .. | .... | .... | 1.01 | 11.11 | .... | .... | 48.49 | 39.39 |
| California, San Quentin | .. | 7 | .. | 12 | 14 | ... | .. | 428 | 916 | .. | .51 | .... | .87 | 1.02 | .... | .... | 31.08 | 66.52 |
| " Folsom | .. | 1 | .. | 4 | 3 | ... | .. | 105 | 308 | .. | .24 | .... | .95 | .71 | .... | .... | 24.94 | 73.16 |
| Maryland | .. | 9 | .. | 1 | 6 | ... | 1 | 135 | 440 | .. | 1.52 | .... | .17 | 1.01 | .... | .17 | 22.80 | 74.33 |
| Virginia | .. | .. | .. | 3 | 7 | ... | .. | 124 | 238 | .. | .... | .... | .81 | 1.88 | .... | .... | 33.33 | 63.98 |
| West Virginia | .. | 3 | .. | .. | 1 | 1 | .. | 25 | 86 | .. | 2.59 | .... | .... | .86 | .86 | .... | 21.55 | 74.14 |
| Tennessee | .. | 1 | .. | 7 | 15 | ... | .. | 360 | 980 | .. | .07 | .... | .51 | 1.10 | .... | .... | 26.41 | 71.91 |
| North Carolina | .. | .. | .. | 5 | 12 | ... | .. | 46 | 465 | .. | .... | .... | .95 | 2.27 | .... | .... | 8.71 | 88.07 |
| South Carolina | .. | .. | .. | 5 | 25 | 25 | 2 | 140 | 349 | .. | .... | .... | .92 | 4.58 | 4.58 | .37 | 25.64 | 63.91 |
| Alabama | .. | 2 | .. | 12 | 25 | ... | .. | 295 | 406 | .. | .27 | .... | 1.62 | 3.38 | .... | .... | 39.86 | 54.87 |
| Texas | .. | 6 | .. | 50 | 43 | ... | .. | 904 | 2,299 | .. | .18 | .... | 1.51 | 1.30 | .... | .... | 27.38 | 69.63 |

Totals: (1) 672. (2) 887. (3) 1358. This last discrepancy is explained by the fact that the report takes the various crimes for which committed instead of the prisoners as a unit. * In addition 2 or 1.32 per cent for offences committed on the high seas.

stance, Connecticut and Pennsylvania, essentially different ratios are found even after making allowance for the different modes of enumeration. Differences in the law and its administration seem more probable explanations than differences of character. In a very general way it has been observed that the more settled the population, the more advanced in civilization, the greater is likely to be the proportion of crimes against property. Slight corroboration of this is found in the fact that the largest percentages of crimes against the person are found in Maine, Michigan, Nevada, and Alabama. Why, on the other hand, it should be so high in Connecticut, New Jersey, and Southern Indiana does not appear. In the South we naturally expect a larger percentage of crimes against the person than in the North.

The penalties inflicted as punishments for crime vary greatly in the various states, as appears clearly from Table IX. The reason for this is so much within the sphere of the law itself and its administration that the table scarcely gives rise to conclusions of a purely sociological nature. For the student of criminal law it offers much food for reflection, presupposing, however, a very accurate knowledge of the details of the law in each state. Even the casual reader must, however, be struck by such differences as are shown in the table between the two penitentiaries of Pennsylvania, or between the adjoining states of Wisconsin and Minnesota.

No question in the whole range of prison statistics is more important than the statistics of Previous Convictions, for they furnish a certain measure for the efficacy of the whole penal system. But at this point our data are lamentably inadequate. In most cases we are not informed what previous convictions are counted. In Auburn, N. Y., it seems probable that previous terms in county prisons are counted. Elsewhere, if we can judge by the analogy with European prisons where the number of first offenders is uniformly much less, only previous terms in state prisons have been

*Table IX.* SENTENCES.

| | Under 1 Year. | 1. | 2. | 3-5. | 5-10. | 10-15. | 15-20. | 20-30. | 30-40. | Over 40. | Life. | Average. | Per Cent. Under 1 Year. | 1. | 2. | 3-5. | 5-10. | 10-15. | 15-20. | 20-30. | 30-40. | Over 40. | Life. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maine | 1 | 10 | 20 | 37 | 32 | 11 | 2 | 2 | ... | ... | 37 | 4.10.22 | .66 | 6.58 | 13.16 | 24.34 | 21.05 | 7.24 | 1.32 | 1.32 | .... | .... | 24.33 |
| New Hampshire | ... | 16 | 11 | 45 | 26 | 5 | 1 | 7 | 4 | ... | ... | ..... | .... | 13.91 | 9.57 | 39.13 | 22.61 | 4.35 | .87 | 6.09 | 3.47 | .... | .... |
| Vermont (5) | ... | 5 | 9 | 26 | 24 | 7 | 11 | 4 | ... | ... | 7 | 7.0.7 | .... | 5.37 | 9.68 | 27.96 | 25.81 | 7.53 | 11.82 | 4.30 | .... | .... | 7.53 |
| Massachusetts | ... | 1 | ... | 85 | 51 | 13 | 3 | 6 | ... | ... | 1 | ..... | .... | .63 | .... | 53.13 | 31.87 | 8.12 | 1.87 | 3.75 | .... | .... | .63 |
| " Reformatory | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Connecticut | 14 | 32 | 52 | 71 | 57 | 20 | 7 | 6 | 2 | ... | 40 | ..... | 4.65 | 10.63 | 17.27 | 23.59 | 18.94 | 6.65 | 2.33 | 1.99 | .66 | .... | 13.29 |
| New York, Sing Sing (1) | ... | 35 | 349 | 405 | 352 | 126 | 55 | 24 | ... | ... | 67 | 5.4.8 | .... | 2.48 | 24.70 | 28.66 | 24.91 | 8.92 | 3.89 | 1.70 | .... | .... | 4.74 |
| " Auburn (2) | ... | 30 | 174 | 309 | 417 | 153 | 47 | 40 | 2 | 4 | 73 | ..... | .... | 2.40 | 13.93 | 24.74 | 33.09 | 12.25 | 3.76 | 3.20 | .16 | .32 | 5.85 |
| " Clinton | 31 | | 132 | | 45 | 12 | 2 | 2 | 2 | ... | 7 | ..... | 13.31 | | 56.65 | | 19.31 | 5.15 | .86 | .86 | .86 | .... | 3.00 |
| Pennsylvania, Eastern | 6 | 161 | 99 | 86 | 36 | 15 | ... | ... | ... | ... | ... | ..... | 1.18 | 51.18 | 19.41 | 16.86 | 8.43 | 2.94 | .... | .... | .... | .... | .... |
| " Western | 1 | 83 | 68 | 63 | 29 | 17 | ... | 1 | ... | ... | 1 | 3.2.3 | .38 | 32.33 | 25.56 | 23.68 | 10.90 | 6.39 | .... | .38 | .... | .... | .38 |
| New Jersey (3) | 14 | 134 | 178 | 166 | 233 | 98 | 23 | 23 | 3 | ... | 7 | ..... | 1.59 | 15.24 | 20.25 | 18.88 | 26 51 | 11.15 | 2.62 | 2.62 | .34 | .... | .80 |
| Ohio | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Indiana, North | 5 | 118 | 205 | 121 | 144 | 31 | 14 | 11 | ... | ... | 53 | ..... | .71 | 16.81 | 29.20 | 17.24 | 20.51 | 4.42 | 1.99 | .57 | .... | .... | 7.55 |
| " South | ... | 81 | 138 | 104 | 97 | 38 | 14 | 18 | ... | ... | 49 | ..... | .... | 15.02 | 25.60 | 19.29 | 18.00 | 7.05 | 2.60 | 3.34 | .... | .... | 9.10 |
| Illinois, Joliet | 1 | 342 | 108 | 89 | 69 | 14 | 4 | 9 | 2 | 1 | 11 | 2.4.24 | .15 | 52.62 | 16.62 | 13.69 | 10.62 | 2.15 | .62 | 1.38 | .31 | .15 | 1.69 |
| " Chester | 3 | 161 | 68 | 46 | 35 | 15 | 4 | 3 | ... | 2 | 3 | 3.1.10 | .88 | 47.35 | 20.00 | 13.53 | 10.29 | 4.41 | 1.18 | .88 | .... | .59 | .89 |
| Michigan | 23 | 87 | 72 | 129 | 80 | 38 | 11 | 9 | ... | 1 | 16 | 4.4.0 | 4.93 | 18.67 | 15.45 | 27.68 | 17.17 | 8.15 | 2.36 | 1.93 | .... | .22 | 3.44 |
| Wisconsin (4) | 11 | 100 | 33 | 21 | 19 | 2 | 2 | 3 | ... | ... | 10 | ..... | 5.47 | 49.75 | 16.42 | 10.45 | 9.45 | 1.00 | .99 | 1.49 | .... | .... | 4.98 |
| Minnesota | 22 | 72 | 61 | 9 | 35 | 5 | 1 | 2 | 1 | ... | 6 | ..... | 10.28 | 33.64 | 28.50 | 4.21 | 16.36 | 2.34 | .47 | .93 | .47 | .... | 2.80 |
| Missouri | 2 | 15 | 769 | 392 | 203 | 85 | 15 | 26 | 5 | 7 | 4 | ..... | .13 | .98 | 50.49 | 25.74 | 13.33 | 5.58 | .98 | 1.71 | .33 | .46 | .27 |
| Kansas * | ... | 122 | 140 | 184 | 277 | 73 | 36 | 25 | 2 | 3 | 13 | ..... | .... | 13.13 | 15.07 | 19.81 | 29.82 | 7.86 | 3.88 | 2.69 | .22 | .32 | 1.39 |
| Nebraska | 3 | 123 | 68 | 55 | 39 | 13 | 5 | 5 | ... | ... | 5 | 3.2.25 | .95 | 38.92 | 21.52 | 17.40 | 12.34 | 4.12 | 1.58 | 1.58 | .... | .... | 1.59 |
| Colorado | 14 | 164 | 85 | 83 | 45 | 5 | 3 | 2 | ... | ... | 4 | ..... | 3.46 | 40.49 | 20.99 | 20.49 | 11.12 | 1.23 | .74 | .49 | .... | .... | .99 |
| Nevada | 1 | 15 | 9 | 8 | 16 | 21 | 2 | 10 | ... | 1 | 16 | ..... | 1.01 | 15.15 | 9.09 | 8.08 | 16.16 | 21.22 | 2.02 | 10.10 | .... | 1.01 | 16.16 |
| California, San Quentin | 3 | 84 | 137 | 223 | 439 | 201 | 66 | 57 | 13 | 13 | 141 | ..... | .22 | 6.10 | 9.95 | 16.19 | 31.89 | 14.60 | 4.79 | 4.14 | .94 | .94 | 10.24 |
| " Folsom | 4 | 22 | 28 | 53 | 127 | 87 | 23 | 20 | ... | 9 | 48 | ..... | .95 | 5.23 | 6.65 | 12.59 | 30.16 | 20.66 | 5.46 | 4.75 | .... | 2.14 | 11.41 |
| Maryland | 2 | 93 | 78 | 151 | 176 | 51 | 30 | 6 | ... | ... | 5 | ..... | .34 | 15.71 | 13.18 | 25.50 | 29.73 | 8.61 | 5.07 | 1.01 | .... | .... | .85 |
| Virginia | ... | 67 | 101 | 73 | 82 | 25 | 19 | 4 | ... | ... | 1 | 5.4.16 | .... | 18.01 | 27.16 | 19.62 | 22.04 | 6.72 | 5.11 | 1.08 | .... | .... | .26 |
| West Virginia | ... | 28 | 38 | 12 | 23 | 9 | 1 | ... | ... | ... | 5 | 3.3.6 | .... | 24.14 | 32.76 | 10.34 | 19.83 | 7.76 | .86 | .... | .... | .... | 4.31 |
| Tennessee | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| North Carolina | 1 | 122 | 120 | 136 | 95 | 37 | 5 | 4 | 1 | ... | 7 | ..... | .19 | 23.11 | 22.73 | 25.76 | 17.99 | 7.00 | .95 | .76 | .19 | .... | 1.32 |
| South Carolina | 129 | 205 | 88 | 45 | 38 | 19 | 2 | 4 | ... | ... | 16 | ..... | 23.63 | 37.55 | 16.12 | 8.24 | 6.96 | 3.48 | .37 | .73 | .... | .... | 2.92 |
| Alabama | ... | 39 | 83 | 176 | 127 | 109 | 23 | 43 | 10 | 18 | 112 | ..... | .... | 5.27 | 11.22 | 23.78 | 17.16 | 14.73 | 3.11 | 5.81 | 1.35 | 2.43 | 15.14 |
| Texas | ... | 4 | 814 | 387 | 1,296 | 272 | 118 | 89 | 26 | 28 | 268† | ..... | .... | .12 | 24.38 | 11.72 | 39.25 | 8.24 | 3.57 | 2.69 | .79 | .85 | 8.12 |

Totals: (1) 1413. (2) 1249. (3) 879. (4) 201. (5) 93, one prisoner sentenced for an indefinite term omitted. * To be added 54 prisoners, or 5.81 per cent sentenced to be hanged. † Includes also some who have a time sentence of sixty years or more.

*Table X.* CONVICTIONS.

| | Convictions. | | | | | | | | | | Per Cent.† | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | First. | Second. | Third. | Fourth. | Fifth. | Sixth. | Seventh. | Eighth. | Ninth. | Tenth and More. | First. | Second. | Third. | Fourth. | Fifth. |
| Maine | 133 | 12 | 5 | .. | 1 | .. | .. | .. | .. | .. | 87.50 | 7.89 | 3.29 | .... | .66 |
| New Hampshire | .... | .... | .... | .. | .. | .. | .. | .. | .. | .. | .... | .... | .... | .... | .... |
| Vermont.* | 85 | 5 | 3 | .. | 1 | .. | .. | .. | .. | .. | 90.42 | 5.32 | 3.19 | .... | 1.07 |
| Massachusetts | 138 | 13 | 9 | .. | .. | .. | .. | .. | .. | .. | 86.25 | 8.13 | 5.62 | .... | .... |
| " Reformatory. | 349 | 138 | 96 | 33 | 22 | 7 | 11 | 3 | 3 | 11 | 51.86 | 20.50 | 14.27 | 4.90 | 3.27 |
| Connecticut | 265 | 24 | 9 | 1 | .. | .. | 2 | .. | .. | .. | 88.04 | 7.97 | 2.99 | .33 | .... |
| New York, Sing Sing | 1,098 | 187 | 78 | 27 | 8 | 3 | 2 | .. | .. | 2 | 78.15 | 13.31 | 5.55 | 1.92 | .57 |
| " Auburn | 697 | 334 | 143 | 50 | 11 | 11 | 2 | .. | .. | .. | 55.85 | 26.76 | 11.46 | 4.00 | .88 |
| " Clinton | 189 | 31 | 8 | 2 | 2 | .. | 1 | .. | .. | .. | 81.12 | 13.32 | 3.43 | .86 | .86 |
| Pennsylvania, Eastern | 317 | 91 | 48 | 25 | 13 | 10 | 2 | 2 | .. | 2 | 62.15 | 17.84 | 9.42 | 4.90 | 2.25 |
| " Western. | 221 | 29 | 12 | 2 | 2 | .. | .. | .. | .. | .. | 83.08 | 10.90 | 4.51 | .75 | .76 |
| New Jersey (1) | 738 | 95 | 31 | 10 | 3 | 3 | .. | .. | .. | .. | 83.86 | 10.80 | 3.52 | 1.14 | .34 |
| Ohio | 698 | 77 | 16 | 3 | .. | .. | .. | .. | .. | .. | 87.91 | 9.70 | 2.01 | .38 | .... |
| Indiana, North | .... | .... | .... | .. | .. | .. | .. | .. | .. | .. | .... | .... | .... | .... | .... |
| " South | .... | .... | .... | .. | .. | .. | .. | .. | .. | .. | .... | .... | .... | .... | .... |
| Illinois, Joliet | 565 | 62 | 17 | 5 | .. | 1 | .. | .. | .. | .. | 86.92 | 9.54 | 2.62 | .77 | .... |
| " Chester | 303 | 31 | 3 | 3 | .. | .. | .. | .. | .. | .. | 89.12 | 9.12 | .88 | .88 | .... |
| Michigan | 341 | 91 | 22 | 8 | 1 | .. | 3 | .. | .. | .. | 73.17 | 19.53 | 4.72 | 1.72 | .21 |
| Wisconsin | 190 | 19 | 2 | .. | .. | .. | .. | .. | .. | .. | 90.05 | 9.00 | .95 | .... | .... |
| Minnesota | 187 | 25 | 2 | .. | .. | .. | .. | .. | .. | .. | 87.38 | 11.68 | .94 | .... | .... |
| Missouri* | 1,338 | 151 | 22 | 8 | 2 | 1 | .. | .. | .. | 1 | 87.85 | 9.91 | 1.44 | .53 | .13 |
| Kansas | .... | .... | .... | .. | .. | .. | .. | .. | .. | .. | .... | .... | .... | .... | .... |
| Nebraska | .... | .... | .... | .. | .. | .. | .. | .. | .. | .. | .... | .... | .... | .... | .... |
| Colorado | 371 | 28 | 4 | 2 | .. | .. | .. | .. | .. | .. | 91.60 | 6.91 | .99 | .50 | .... |
| Nevada | .... | .... | .... | .. | .. | .. | .. | .. | .. | .. | .... | .... | .... | .... | .... |
| California, San Quentin | 1,096 | 170 | 68 | 25 | 5 | 9 | 2 | 2 | .. | .. | 79.59 | 12.35 | 4.94 | 1.82 | .36 |
| " Folsom | 321 | 76 | 14 | 4 | 2 | 2 | 2 | .. | .. | .. | 76.25 | 18.05 | 3.33 | .95 | .48 |
| Maryland | 502 | 65 | 14 | 7 | 2 | 1 | 1 | .. | .. | .. | 84.80 | 10.98 | 2.36 | 1.18 | .34 |
| Virginia | .... | .... | .... | .. | .. | .. | .. | .. | .. | .. | .... | .... | .... | .... | .... |
| West Virginia | .... | .... | .... | .. | .. | .. | .. | .. | .. | .. | .... | .... | .... | .... | .... |
| Tennessee | .... | .... | .... | .. | .. | .. | .. | .. | .. | .. | .... | .... | .... | .... | .... |
| North Carolina | 481 | 39 | 6 | 2 | .. | .. | .. | .. | .. | .. | 91.10 | 7.39 | 1.14 | .37 | .... |
| South Carolina | .... | .... | .... | .. | .. | .. | .. | .. | .. | .. | .... | .... | .... | .... | .... |
| Alabama | .... | .... | .... | .. | .. | .. | .. | .. | .. | .. | .... | .... | .... | .... | .... |
| Texas | 2,994 | 264 | 44 | .. | .. | .. | .. | .. | .. | .. | 90.67 | 7.99 | 1.34 | .... | .... |

Totals: (1) 880. *Convictions to this prison. †Not calculated beyond the "fifth."

counted. On the other hand, the decentralization of prison management in this country renders the collection of these data very difficult. Hence, the data which have been presented lack entirely the definiteness so essential for statistical conclusions.

Throughout the foregoing paper the aim has been to present, rather than to utilize for any special purpose, the statistics of prisons for the year 1888. The data for a single year are obviously insufficient for a searching analysis of the phenomena of crime. Yet a basis for future studies has been made. The progress of statistical inquiry is to establish first broad general rules, and afterwards to descend to a more detailed examination of the deviations from them. In the foregoing pages we have had a glimpse at some of the general rules relating to crime, if we can assume a single year, 1888, as typical. This the statistician is always privileged to do, unless there is strong evidence to rebut the assumption. The analogy with European countries which have carefully elaborated criminal statistics is sufficiently close to warrant us in believing that in presenting the statistics for the year 1888 we have a fair picture of the sociologically important characteristics of the convicts of the United States.

Incidentally, therefore, it has been demonstrated how much light prison reports throw upon the subject of crime. The data which they present must, upon closer consideration, strike one as singularly uniform. The development of the statistical portions of the reports seems to be wholly in the discretion of the officials in charge. Hence, it would be, indeed, surprising if there was not a considerable variety. In surveying the field with a view to obtaining greater uniformity, one meets with difficulties of various degrees. In a number of cases the same data are collected, but grouped differently in the different reports. In some reports subjects are omitted which are to be found in others. As a rule, there is too little explanatory matter, so that in some cases, as for instance in regard to previous convictions, one is entirely at sea as to the meaning of the figures presented. In each report a statement is desirable as to the relations of the state prison and the smaller prisons of the state.

A still greater bar to uniformity is the different periods of time to which the data relate. This is caused by the various

financial years of the various states, to which the financial showings of the prisons must necessarily conform. But with regard to the personal statistics the same necessity does not exist. In fact, for such purposes the calendar year seems more appropriate than any fiscal year. Nor can we conceive of any serious disadvantages arising from having the accounts relate to one year, and the details of the personal statistics to another. If, by a combination of those interested, the statistics could be obtained relating to a uniform time, a basis would be gained for a closer systematical study of crime in this country, which could not fail to be of advantage. Next in importance would be a uniform basis of enumeration for all the prisons. For the purposes which are here contemplated, the number received during the previous year should be the basis. It would of course be desirable to have also the number remaining at the end of the year enumerated also. Yet if only one method were followed the former would be preferable; and to know the actual population of the prisons we could rely upon the census.

What is here proposed is the perfecting of existing methods. When this is accomplished it may be in order to call attention to possible future developments of prison statistics. Indeed, the perfection of what we now possess will naturally lead to a desire for more definite knowledge where it seems obtainable. The increased attention paid to the study of crime, and the greater unity of effort brought about by the prison congresses lead us to hope that it will not be long before the modest wishes here expressed are realized.

# AN ACCOUNT OF THE COLLECTIONS OF THE AMERICAN STATISTICAL ASSOCIATION.

By the Hon. Samuel A. Green, M.D.,
Librarian Massachusetts Historical Society.

The first volume of the Collections of the American Statistical Association (Boston, pp. x, 596) was published in the year 1847, and consisted of three parts, which had appeared at different times; the first part in 1843, the second in 1845, and the last in 1847. Each part had a separate index, though paged continuously from one to another. They were written severally by the Reverend Joseph B. Felt, LL.D., the Recording Secretary of the Association, and they form a book of considerable interest and value. They give a large amount of original statistical matter, and on every page show signs of patient research and thorough work.

This statement is prefatory to a bibliographical analysis of the second volume of the Collections of the same Association, so far as it was printed, but never published.

The Massachusetts Historical Society has a copy of the first 136 pages of the second volume, which once belonged to the Recording Secretary of the Association. It consists of three papers,— and two pages of a fourth paper in order to fill out the form,— which were presented at different times to the Association; and, apparently, it was a file copy of the editor. The papers are paged consecutively and stitched together, or "stabbed," without any cover. They comprise a "Memoir of the Life and Character of George Cheyne Shattuck, M.D., late President of the American Statistical Association. Read before the Association, April 12, 1854. By Edward Jarvis, M.D." (pp. 7); "Statistics of Comb-making in Leominster, 1852" (pp. 8–16), by Caleb Clesson Field, M.D.; and a "Memoir of American Discoveries, Colonization, Commerce, and Fishery, from Newfoundland to Florida, both inclusive, down to 1630. By Joseph B. Felt, LL.D." (pp. 17–134), besides the first leaf (pp. 135, 136) of "The Financial Revulsion of 1857. An Address delivered before

the American Statistical Association, February 10, 1858, by Hon. Samuel H. Walley."

This set of papers was given to the Historical Society by Dr. Felt, on October 20, 1858; and on the same day he gave another set to the Boston Athenæum, which contains forty more pages, comprising the following titles: Mr. Walley's Address, as given above (pp. 135–160); "Letters on the Money Crisis of 1857" (pp. 161–175), by Nathan Appleton; and a single page (176), on the Connection of Occupation with Longevity, by Edward Jarvis, M.D., President of the Statistical Association, which is complete in itself. The Athenæum copy, which has now been put in binding, once had a paper cover, of which the front part is still preserved, and on it is written "Collections of the American Statistical Association. [First Portion of Vol. II.]"

The Historical Society has another pamphlet, given by the Statistical Association, which exactly fits on the Athenæum set mentioned in the preceding paragraph. It is entitled: "The Increase of Human Life. Read before the American Statistical Association. By Edward Jarvis, M.D., President of the Association" (pp. 177–231). This copy, in connection with the one at the Athenæum, makes a continuous series of 231 pages of the second volume of the Collections. It is not probable that the same papers, taken together in this form, are to be found elsewhere.

The question now comes up, What became of those signatures that had been already printed; and, fortunately, there is an answer. It is known that they were kept in sheets for many years, much to the annoyance of the printers, who were desirous that they should be folded and stitched, and with a title-page issued as the first Part of Volume II. In fact, at a meeting held on January 15, 1869, the Publishing Committee were authorized to do this, but owing to various circumstances it was never done. At that time Dr. Jarvis was intending to prepare another paper, which was to appear in the same Part, but he did not carry out the plan; and this delay caused, indirectly, the destruction of the sheets. At the time of the Great Fire in Boston, which broke out on the evening of November 9, 1872, they were stored in the printing office of T. R. Marvin & Son, when their establishment and all the contents were burned. Thus disappeared, probably, the last trace of the first Part of Volume II of the Collections of the American Statistical Association, with

the exception of the two file copies, more or less complete, which were given by the Recording Secretary to the Massachusetts Historical Society and to the Boston Athenæum; and with the further exception of the first 16 pages,— containing the Memoir of Dr. Shattuck, and the Statistics of Comb-making in Leominster,— which were given to the Boston Public Library by Dr. Jarvis, on November 24, 1865, and of the last 54 pages on "The Increase of Human Life," distributed by the author.

Some of these papers were also printed separately from the same forms, but with a new paging. Dr. Jarvis's Memoir of Dr. Shattuck (pp. 1–7) and Mr. Walley's Address (pp. 1–28) were of this number. Mr. Appleton's Letters had been previously printed in a pamphlet, entitled "Remarks on Currency and Banking" (Boston, 1857), and in a communication to the "Boston Daily Advertiser," March 4, 1858. Dr. Jarvis's page on the "Connection of Occupation with Longevity" was circulated as a leaflet; and his paper on the "Increase of Human Life" appeared originally in "The Atlantic Monthly" for October, November, and December, 1869. This article was soon afterward republished by the Statistical Association, in form and type to match the Collections, and the paging was adapted to its place in the new volume. Copies of this pamphlet, with a paper cover, were distributed by the author among his friends. There was also an edition of 1000 copies printed for the New England Mutual Life Insurance Company, with the same type and from the same forms, though paged separately, and with a title-page and cover.

Some of these papers that make up Part I of the missing volume are too valuable to be lost, and they should be reprinted and brought out anew, in connection with the other publications of the Association. Dr. Felt's "Memoir of American Discoveries, Colonization, Commerce, and Fishery," etc., is one of great research, and contains much not easily accessible elsewhere. The copious foot-notes on nearly every page abound with the authorities which he consulted in the preparation of the article, and they show the thoroughness of the work.

## GALTON'S STATISTICAL METHODS.

*Natural Inheritance.* By Francis Galton, F.R.S. London and New York. Macmillan & Co. 1889. Pp. ix, 259.

This work is of double interest. Its primary purpose is biological, being to subject the question of heredity to accurate quantitative and mechanical treatment. As such it is doubtless the ablest work on the subject extant. But in the course of his investigation Galton has collected a large mass of statistical information, and, what is more important, has developed some new and interesting statistical methods. The key-note to the statistical side of the work is contained in Galton's statement that statisticians are apt to be content with averages, while an average is only an isolated fact. What is wanted is a method of *calculating distribution*, and a graphic scheme for reading the distribution. For example, compared with the knowledge of the average income of an English family, a knowledge of how the total income of England was distributed would be much more important. This would tell us the proportion which had incomes of every grade from the lowest to the highest, and would enable us to rank any given family at its place in the scale.

Particularly, in dealing with problems of heredity, is a scheme of distribution necessary. The knowledge of the average stature of a kinsfolk conveys little; the knowledge of how this faculty is distributed among the members of the kindred would be valuable. Galton's first work was to invent a scheme of distribution. The data to be dealt with, for example, are the strength of pull of 519 males as registered on a Salter's machine. The following are the figures: —

| STRENGTH OF PULL. | PERCENTAGE. |
|---|---|
| Under 50 pounds, . . . . | 2 |
| " 60 " . . . . | 10 |
| " 70 " . . . . | 37 |
| " 80 " . . . . | 70 |
| " 90 " . . . . | 91 |
| " 100 " . . . . | 95 |
| Over 100 " . . . . | 100 |

This might be illustrated by a diagram: —

The percentages of strength are marked off on a base line, the number of pounds on the right-hand perpendicular line. Then from each per cent, 2, 10, 37, etc., is erected a perpendicular to a height equal to the corresponding number of pounds.— *i. e.*, from 37 per cent would be erected a perpendicular to a height equal to 80 pounds, since 37 per cent pulled less than 80 pounds. While a line connecting these various perpendiculars will be broken, it is evident that, if the data were numerous enough, and the strengths more closely taken, say to every pound, we would get, approximately, a curved line. The figure, bounded by a curve of this kind is a scheme of distribution. (The perpendiculars, since they serve only for scaffolding, would not appear in an ordinary scheme.) By taking the measured strength of any individual on the side scale, say 74 pounds, carrying over a horizontal line until it meets the curve, and then dropping a perpendicular to meet the base line, the proportionate rank of the individual may be read off,— in this case 50 degrees. In other words, since 50 per cent exceed and 50 per cent fall short of his strength, he occupies a medium position, and his strength is mediocre. This position Galton always designates by M, and this M is always one of the chief constants in Galton's scheme. He notes that the M has three properties. The chance is an equal one that any previously unknown rank falls short of or exceeds M. The most probable value of any previously unknown measure is M; and, if the curve of the scheme is bilaterally symmetrical as respects M, M is identical with the ordinary average or arithmetical mean. It is evident that we have the start for an application of the theory of probability. Now, if the deviation of any grade from M is considered, that is, the error as respects the mean, we find that every measure in a scheme may be expressed by $M+(\pm D)$, the + or − signifying up or down from M.

Galton's other constant he designates by Q. It is obtained as follows. Take the perpendicular at 75°, and that at 25°. Subtract the latter from the former and divide by 2, and we get a measure of the general *slope* of the curve of distribution, just as M measures the average height of the curved boundary. What it *really* gives is the deviation from the average, both in excess and in deficiency, of one half the number taken. For example, the Q of the scheme of distribution of stature is 1.7 inches. This means that one half the population

differs less than 1.7 inches one way or the other from the average of the whole population.

Now, although this Q stands on its own independent basis, and can be derived from any scheme by dividing the differences of the ranks of 25° and 75° by 2, if the curve is symmetrical, it will be identical with what the mathematicians call the Probable Error. It thus becomes possible to apply the whole calculus of probability to any data capable of being expressed in a normal case of the scheme.

As matter of fact, Galton found a remarkable parallelism between results obtained by observation and those theoretically deduced from the mathematical calculations. He took, for example, eighteen schemes of distribution, including stature, weight, breathing capacity, strength of blow, keenness of sight, for both sexes, calculated the Q in each, or the measure of deviation that half the deviations exceeded, and half fell short of, and then calculated a mean Q, as it were, for the whole eighteen. The result differs but little from that theoretically obtained by the law of frequency of error. It is evident that Galton might express his scheme in the well-known curve of error, but his curve of distribution contains all that the curve of error contains, and much besides.

For the particular results obtained, I must refer to the book itself. One is so remarkable that it may be specified. If we call the M of the stature of the whole population P, and the mean stature of the parents $P \pm D$, the stature of the offspring will be, on the average, $P \pm \frac{1}{3}D$. In other words, upon the average, children of parents who are exceptional, or who deviate from the mean, will themselves deviate from the mean only one third of their parents' deviation. Considering the character of his results, it is not wonderful that Galton says: "I know of scarcely anything so apt to impress the imagination as the wonderful form of cosmic order expressed by the 'law of the frequency of error.' The law would have been personified by the Greeks and deified if they had known of it. It is the supreme law of Unreason. Whenever a large sample of chaotic elements are taken in hand, and marshaled in the order of their magnitude, an unsuspected and most beautiful form of regularity proves to have been latent all along."

It is to be hoped that statisticians working in other fields, as the industrial and monetary, will acquaint themselves with Galton's development of new methods, and see how far they can be applied in their

own fields. It is, of course, clear that any data dealing with the proportions of distribution of anything whatever can be diagrammatically expressed in Galton's scheme; but if it is to be anything more than a picture for the eye, it must be possible to establish an M and a Q from which the entire scheme of deviations and their relations may be, in turn, deduced, at least approximately. In other words, such a scheme, if its curve were wholly irregular, would not be likely to yield any results. Furthermore, no curve is likely to be regular unless it expresses traits which are the result of accidents, that is, of circumstances which *do* bring about certain results, though they were not intended for that purpose. For example, if we had (what we are not likely to have) accurate data regarding the accumulation of wealth in families from parents to children, there is no great reason for expecting that in two generations we would get results akin to those of Galton regarding natural heredity. The tendency of wealth to breed wealth, as illustrated by any interest table, and the tendency of extreme poverty to induce conditions which plunge children still deeper into poverty, would probably prevent the operation of the law of regression toward mediocrity. It is not likely that children of the poor would be better off, and children of the wealthier poorer in anything like the ratio of $\frac{2}{3}$. But if we took generations enough, the operation of "accidents," such as imprudent, extravagant, and dissipated habits among the children of the rich, the growth of new industrial conditions which lessen the value of old forms of wealth, the emergence of money-makers among the poor, the development of social relations which would increase the ambition and chances of the poor, etc., we might find a similar law. That is, these accidents, or circumstances which, although in themselves irrelevant to the distribution of wealth, yet in the long run, largely determine it, would pelt down as it were the swells in the curve, and bulge out its depressions into something like a normal curve of distribution. Whether or not there is any truth in our example, it will serve to illustrate the nature of the data to which Galton's methods may be applied.

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## INSURANCE RECORDS.

*Hand-Book of Life Insurance on the Assessment Plan.* Fourth Annual Edition. Carefully corrected to June, 1889. New York: Chicago: Spectator Co. 1889. Pp. 332.

*The Insurance Year Book.* 1888–1890. Seventeenth Annual Issue. Carefully corrected to June 15, 1889. New York: Chicago: Spectator Co. 1889. Pp. 690. Appendix (Fire Protection), pp. 222.

These books are indispensable, not only to underwriters and their agents, but also to the completeness of the reference shelves of every library, because they unquestionably embrace more facts and tables of figures in detail than any other publications relating to their subject matter. They form the nearest approach to a complete annual insurance report for the whole country which we have. This is not saying that they are exhaustive, or are claimed to be so by the publishers. Their contents serve as a copious index to what may be found in our several state official insurance reports, and embrace much matter which none of these include, while their composition is sufficiently systematic to economize the time of the student or person who uses them.

Their prime object is to serve the uses of those connected with the conduct of insurance business, and they follow without criticism the distinctions, definitions, and nomenclature (in many particulars unscientific) customary with them. For the purposes of the statistician they are nevertheless a comprehensive store of raw material, or key to where it may be found.

Such ratios and deductions as they embrace, with one exception, are simply given for what they may be worth; and the student who regards or quotes them has himself to blame if he does so without first examining on what bases they rest, and with what qualifications and limitatations they should be taken. The one exception above named is the "definitive analysis of life assurance returns" of Mr. B. F. Brown, which occupies pages 542 to 589 inclusive of the "Year Book," for the claims of which to scientific merit the author

is individually responsible. He does not, however, attempt to argue these claims in presenting his figures, and whatever the conclusions of those who examine them may be, the study of so careful a compilation cannot fail to be instructive.

In the writer's judgment Mr. Brown has not reduced his problem to its lowest terms; and has not clearly defined actual differences of economy by eliminating the effects of the different business customs which govern the retention and accumulation of surplus, and exaction of forfeits. This may be because he has lacked the data to fully carry out his analysis of surplus earned.

W. C. W.

## MUNICIPAL BUDGETS.

*Bulletin annuel des finances des grandes villes.* Huitième Année: 1884. By Joseph Körösi. Buda-Pesth. 1889. Pp. xii, 49.

In 1876 Dr. Körösi was intrusted by the Statistical Congress with the work of collecting municipal financial statistics. Since then he has periodically issued the *Bulletin Annuel*, under great difficulties however, and not with that degree of success which he himself desires to attain. There are two difficulties. In many cases it is almost impossible to present on a common plan the financial statements of large cities, governed under different administrative systems; and on the other hand, there is the inertia and unwillingness on the part of officials to comply with the courteous request, which the editor annually makes for reports. For this reason the author questions the advisability of longer continuing this series of bulletins. All statisticians will view such a suggestion with regret. For this report it was designed to include the statistics of 61 of the Continental cities of Europe, but, unfortunately, of this number there appear statements from only 28. Only one city of the United States, Providence, out of the eleven invited to send reports, complied with the request. The cities of Great Britain are designedly not included, as their administrative organization differs so greatly. Among the large Continental cities which fail to appear are Naples, Rome, Madrid, Lisbon, Brussels, and Marseilles.

Besides the detailed statements with reference to the finances of each city, there are published in this *Bulletin* several general comparative tables of great interest. The table on the debt of the 28 municipalities is here inserted.

| Cities. | Population. | Funded Debt. | | Floating Debt. | Total. Per Cap. |
|---|---|---|---|---|---|
| | | Total. | Per Cap. | | |
| | *In thousands.* | *In million francs.* | *Francs.* | *In million francs.* | *Francs.* |
| Paris | 2,327 | 1829.4 | 786.1 | 9.1 | 790.0 |
| Berlin | 1,252 | 187.4 | 149.7 | 6.2 | 154.7 |
| St. Petersburg | 861 | 6.8 | 8.0 | .1 | 8.2 |
| Moscow | 753 | 7.1 | 9.5 | 1.7 | 11.8 |
| Vienna | 730 | 138.8 | 188.0 | 3.7 | 193.1 |
| Warsaw | 407 | 4.5 | 11.3 | ... | 11.3 |
| Buda-Pesth | 393 | 39.0 | 99.4 | 1.6 | 103.6 |
| Milan | 349 | 69.9 | 200.2 | 6.2 | 218.2 |
| Copenhagen | 269 | 30.1 | 112.0 | .1 | 112.6 |
| Munich | 252 | 46.9 | 186.3 | 2.3 | 195.6 |
| Dresden | 238 | 25.2 | 106.0 | 1.3 | 111.5 |
| Stockholm | 199 | 51.4 | 257.5 | 3.1 | 273.4 |
| Prague | 175 | 31.1 | 177.7 | 2.5 | 191.9 |
| Königsburg | 149 | 10.2 | 68.6 | .1 | 69.7 |
| Trieste | 148 | 12.4 | 84.1 | 1.0 | 90.9 |
| Frankfort, O. M. | 147 | 46.6 | 317.1 | .1 | 317.5 |
| Venice | 142 | 9.8 | 68.8 | .1 | 69.7 |
| Hague | 131 | 17.8 | 135.7 | .1 | 136.6 |
| Christiana | 128 | 14.3 | 112.1 | 1.3 | 122.3 |
| Bologna | 127 | 8.1 | 63.5 | 1.5 | 75.9 |
| Nuremburg | 107 | 14.4 | 134.5 | .8 | 142.3 |
| Bremen | 103 | 10.5 | 102.8 | ... | 102.8 |
| Gratz | 97 | 9.1 | 94.3 | .4 | 98.7 |

Among other general tables are those stating the receipts and expenses of the several cities. These are given in detail with per capita computations, so that one can compare quite readily the per capita expenditures, for example, for police, street cleaning, education, etc. It is to be observed that the detailed notes explain many things which would be misleading in a general table. It may be noted that in *L'Economiste* for August 24, 1889, there is a suggestive review of this last number of the *Bulletin*, by Leroy-Beaulieu.

## REPORTS OF TREASURY BUREAU OF STATISTICS.

*Quarterly Report of the Chief of the Bureau of Statistics, Treasury Department, relative to the imports, exports, immigration, and navigation of the United States.* Nos. 1–3, 1888–1889. Washington. 1889. No. 1, pp. v, 235; No. 2, pp. iv, 237–472; No. 3, pp. iv, 473–613.

As at present arranged, the titles of the first 17 tables in these Quarterly Reports are uniform in the several issues; and consequently the tables furnish consecutive matter relating to the same subjects. In the latter part of each number, under the heading "Miscellaneous," the compiler takes a freer range, and publishes statistical data for which special investigations are often made. In accordance with this plan in No. 1 the Miscellaneous Tables are devoted to setting forth the trade of the United States, United Kingdom, France, and Spain with Mexico, Central America, the West Indies, and South America; and also to the Intransit and Transhipment trade of the United States and Canada. No. 2 contains tables on exports and imports of merchandise, coin and bullion, breadstuffs, mineral oils, cotton and tobacco, cattle and beef products. Many of these tables are illustrated by diagrams with percentage calculations. From the standpoint of social interests the Miscellany of No. 3 is of the greatest interest. It is almost entirely taken up with the statistics of distilled spirits, malt liquors, and wines. These subjects are treated under consumption, production, manufactures, persons engaged, commerce, etc., and not only embrace the figures for our own country, but also those for the United Kingdom, France, Germany, Denmark, Sweden, and Canada. These tables are accompanied by three diagrams. Of value also in this number is the list of Boards of Trade and Chambers of Commerce in the United States. Lists of officers and statements as to their respective publications are added.

## STATISTICS OF CITIZENSHIP IN MASSACHUSETTS.

The Nineteenth Annual Report (1888) of the Massachusetts Bureau of Statistics of Labor is devoted to two subjects: *Strikes and Lockouts*, 1881–1886; and *Citizens and Aliens*. The former inquiry will be noticed hereafter in the annual review of Labor Reports. The latter topic, however, is more novel as a subject of inquiry, and is likewise of general political and social interest.

In 1882 the Massachusetts Bureau first published tables based upon the census of 1875, showing the nativities of voters and aliens, and the number of polls, voters, and votes cast. The last issue accordingly subjects the census of 1885 to a similar analysis, and thus furnishes the first valuable material suitable for comparison.

The total number of males of voting age in the state is 572,726, not all of whom, of course, are voters. This total is to be divided as follows: —

| | |
|---|---|
| Males not polls, . . . . . | 4,767 |
| Polls not voters, . . . . . | 26,212 |
| Legal voters, . . . . . | 442,616 |
| Aliens, . . . . . | 99,131 |

By "polls" is meant all males, native or foreign born, over 20 years of age, not constitutionally exempted by the assessors on account of age, infirmity, or poverty. Aliens are foreign-born males of voting age, not yet naturalized, and is thus used above in a restricted sense. From the preceding analysis it appears that 77.93 per cent of the polls are legal voters; not all, however, are registered voters, but possess the constitutional qualifications for suffrage. The voters constitute nearly one fourth, or 22.79 per cent.

The number of polls who are aliens is 99,131, this number being 17.45 per cent of the total polls, or, differently expressed, slightly more than one sixth of the polls are aliens. The aliens are about 5 per cent of our total population, a proportion so small as to allay all fear of their adverse influence negatively upon our political life. In 1875 the voters were 78.08 per cent of polls, and 21.25 per cent of population, while the aliens were 17.60 per cent of polls. The percentages of voters of population and of aliens of polls, therefore, do not greatly differ now from what they were ten years ago. The

proportion of polls who are voters is slightly less now than then, while the proportion of population who are voters is slightly greater. The aliens in the state in 1875 numbered 79,136; they now number 99,131. In 1875 this class constituted 16.78 of the total male population 20 years of age and over, while now it constitutes 17.31 per cent. It therefore plainly appears that, although the aggregate number of aliens has increased, the proportion of aliens to the total population of which they form a part has not materially changed. In other words, although our manufactures have developed, and the factory system been extended, and our manufacturing towns have today a larger foreign-born population than ever before, naturalization has kept pace with the growth of population.

The foreign-born naturalized voters of the state number 98,730, or 22.31 per cent of the total voters, an increase of less than three per cent since 1875. Of all foreign nationalities the Irish have been the most alive to secure naturalization. For them the percentage of those naturalized to the total number of Irish males, 20 years of age and over, is 63.75. Next in rank come the Welsh, Germans, English, and Scotch. The percentage of the Canadian French is very small, 22.90 per cent. They as yet are not in a position, or do not care in any great degree, to avail themselves of the act of suffrage.

## STATISTICS OF NEW JERSEY.

*Geological Survey of New Jersey. Final report of the State Geologist. Vol. I. Topography, Navigation, Climate.* George H. Cook, State Geologist. Trenton, New Jersey. Pp. ix, 439.

Among the subjects of this volume is included population of New Jersey,— there being published the population statistics for all the censuses, including those of the colonial period in 1737, 1745, and 1785. The census of 1885 is briefly analyzed,— a point which is some slight value, as the results were originally published by the Secretary of State with no comment whatever. Among the papers on Climatology there is published a list of the dates of opening and closing of navigation on the Hudson River, Delaware River, and some of the canals of the state for long terms of years. The table giving a summary of areas is new, as the topographical survey is recent. A

new determination was made of the water surface, upland, tidemarsh, forest, etc. From this it appears that the area of closed upland determined from the survey exceeded the census figures for improved land by about 17 per cent. "This is sufficiently close to establish the accuracy of the census figures. The agreement of the two sets of figures, obtained by entirely independent and widely different methods, is in fact remarkable."

## RAILROAD STATISTICS.

*First Annual Report on the Statistics of Railways in the United States to the Interstate Commerce Commission for the year ending June* 30, 1888. Henry C. Adams, Statistician. Washington, 1889. Pp. 390.

*Manual of the Railroads of the United States for* 1889, *showing their route and mileage, etc.* By Henry V. Poor. H. V. and H. W. Poor, New York, 1889. Pp. 130, xxvii, 1064, 293.

The following comparison of these two Statistical Reports is from an article in the September issue of *The Railroad and Engineering Journal*, Philadelphia: —

This year the figures of the *Manual* are supplemented by the publication of the first annual report of the Statistician of the Interstate Commerce Commission.

The Interstate Commission returns were received from companies owning or operating 139,102 miles of railroad, and the Statistician estimates that there were in addition 10,800 miles of railroad, making a total of 149,902 miles. The figures for capital, earnings, etc., given in his tables are from returns received from 136,884 miles of road.

On the other hand, *Poor's Manual* reports the total mileage of railroad in the United States at 156,082 miles, but its figures are not all based on that mileage.

The Commission reports have the advantage that they cover a uniform year (that ending June 30, 1888), and were made on a uniform plan; but *Poor's* reports, while they do not cover a uniform year, are generally brought up to a later date, the majority of the companies covering the calendar year 1888 with their figures.

With these facts understood, it will be interesting to make some comparison of the two sets of figures, giving the stock, debt, earnings, and expenses of the railroads of the United States: —

| | Commission. 136,884 miles. | *Poor's Manual.* 154,276 miles. |
|---|---|---|
| Stock | $3,864,468,055 | $4,438,411,342 |
| Funded debt | 3,869,216,365 | 4,624,035,023 |
| Floating debt | 396,103,311 | 306,952,589 |
| Total | $8,129,787,731 | $9,369,398,954 |
| Per mile of road | 59,392 | 60,731 (145,341 miles.) |
| Earnings: | | |
| Passengers | $277,339,150 | $251,356,167 |
| Freight | 613,290,679 | 639,200,723 |
| Other sources | 19,991,391 | 60,065,118 |
| Total | $910,621,220 | $950,622,008 |
| Working expenses | 594,994,656 | 653,258,331 |
| Net Earnings | $315,626,564 | $297,363,677 |
| Other receipts | 89,593,471 | 84,897,880 |
| Total | $415,220,035 | $382,261,557 |
| Fixed charges | 285,492,433 | 288,610,506 |
| Surplus | $129,727,602 | $93,651,051 |

The surplus, according to the Commission report, was 3.35 per cent on the stock, but this was probably greater than the real return. According to the *Manual* the dividends actually paid amounted to $78,943,041.

Some of the discrepancies in the above tables arise without doubt from differing methods of classifying earnings, etc., and from the arrangement of figures under varying heads.

According to the Commission returns the railroads derived 30.46 per cent of their earnings from passengers. 67.35 per cent from freight, and 2.19 per cent from other sources. The division of working expenses was: Maintenance of way, 22.60 per cent; maintenance of equipment, 17.09; conducting transportation, 50.26; general expenses, 9.34; miscellaneous, 0.71 per cent.

The traffic figures given by *Poor's Manual* are of interest as showing the extent of business done by the railroads: —

| | |
|---|---|
| Train mileage | 688,751,371 |
| Passengers carried | 451,353,655 |
| " " one mile | 11,190,613,679 |
| Tons freight carried | 589,398,317 |
| " " " one mile | 70,423,005,988 |
| Average passenger journey | 24.78 miles. |
| " freight haul | 119.48 " |
| " receipt per passenger per mile | 2.246 cents. |
| " " per ton per mile | 0.907 " |

## MECHANICAL STATISTICAL DEVICES.

In the *Abstract of the Proceedings of the Society of Arts for the Twenty-Seventh Year*, 1888–1889 (Boston), there is published an abstract of a paper read before the Society by Mr. Charles F. Pidgin of the Massachusetts Bureau of Labor, on *Statistical Tabulation by Machinery*. The following paragraphs relate to the development of the tabulating devices used in the work of the Massachusetts Bureau.

We are all familiar with the four perpendicular and one cross line to indicate five. In 1875 I prepared and copyrighted a "Self-Counting Tally Sheet." Upon these sheets the dots were already printed, and the tabulator, by encircling the dots and adding certain checks, could tabulate 9000 points on a sheet six by nine inches; and, what was of particular importance, could carry out the results at once, the sheets being so arranged as to "self-count" the check marks. The self-counting tally sheet was used to prepare the population and social statistics of the State Census of 1875. Seaton's tallying machine, used in the United States Census of 1880, was ingeniously arranged to receive the check marks in prepared columns, but it was not self-counting, and the aggregations were necessarily laborious and tedious. A tallying machine used in the Royal Bureau of Statistics at Rome has figures on the peripheries of wheels, and when these upturned figures are inked with a printer's roller, impressions may be taken on paper for use as bulletins. In 1882 I used, for the first time, a mechanical device for tallying or counting. This was named the "Pascal" counting machine. It registers from 1 to 999, and beyond that, by an ingenious device, its capacity may be indefinitely extended. The single machine is intended to count one at a time only. By combination of a number of machines the series may be used for addition or multiplication.

The Pascal machine is the foundation of the "Automatic Door Counting Machine," by means of which the population and social statistics of the Massachusetts State Census of 1885 were prepared. By this machine a great gain is made over previous methods, both in speed and accuracy. With the old form of tabulation sheet but three points of statistical information were secured at a time, while the machine referred to has a capacity of 144 points at one handling of the schedules. Its efficiency is from five to twenty times that of the old methods of tabulation.

For addition both printed and mechanical devices are used. The printed one is called "Self-Counting Form, for Adding Values,

Quantities, and Numbers." This form, based upon the decimal disintegration of numbers, was used in aggregating the Industrial Statistics of the Massachusetts Census of 1875. It supplies a means of adding, paradoxical as it may seem, without the use of figures. To add "50,000," "100,000," or even "1,000,000," requires but one check on the sheet. The electrical adding machine is based upon this invention.

In 1882 mechanical adding machines were introduced into the Bureau. The first one used was the Pascal counter, used in a series. To secure the total required a peculiar result slip and some little time to add the respective columns of results. To overcome this delay a new machine, called "The Billionaire," was invented, which gave a continuous total easily read by a glance at the dial-plate. In this machine the "carrying" device was controlled by the eye, its action not being automatic. The next invention was the "Cylinder Adding Machine," in which the ear, or sound, was relied upon to govern the carrying device, and it was a material advance upon the Billionaire. The succeeding improvement was the "Button" machine, in which "touch" took the place of eye or ear, and was found to be more efficacious than its predecessors.

There is an intermediary process between counting one at a time and the addition of *large* numbers. This is the addition of *small* numbers, running from 2 to 50, or even 100. To do this kind of work expeditiously the "Rotary Counting Machine" was invented. By its use such small numbers can be added automatically, no attention being required by the carrying device. The capacity is 25,000, and it is small enough to be carried in the pocket.

The speaker next referred to his "Electrical Adding Machine." This machine is based upon the decimal disintegration of numbers, — the same principle as was made use of in constructing the "Self-Counting Form for Adding Values, Quantities, and Numbers." The capacity of the machine likely to be most used is 999,999,999, but the capacity may be easily extended indefinitely. Machines can be easily constructed on this plan to add yards, feet, and inches; pounds, shillings, pence, and farthings; fractions,— in fact, any collocation of units, the machine doing the necessary reductions automatically, and showing a consecutive total on a dial plate.

With a view of inventing a machine, or rather a system, which would give the same opportunities for addition as the Automatic Door Counting Machine does for tallying, I devised the "Chip System." The chips are contained in a case, and are taken from it the same as a compositor selects type when "setting." By the use of variously colored "chips," and a machine with 36 compartments, a clerk can add 144 points at once,— that is, have 144 different sums in addition going on at the same time, with 144 results when the "chipping" is completed. The chips are put back in the cases, and used over and over again.

For the figuring of percentages Thatcher's machine has been used, but it does not give enough decimal places for advanced statistical work. The speaker's "Addition Percentage Tables" reduce the figuring of percentages to simple addition, with decimals carried to the seventh place.

## MINOR NOTICES.

*Report on the Custody and Condition of the Public Records of Parishes, Towns, and Counties.* (Massachusetts). By Carroll D. Wright, Commissioner. Boston. 1889. Pp. li, 379.

This work will naturally be of great assistance to students desirous to learn what official records are in existence in Massachusetts towns. Information is also given concerning the state of preservation of such records. The list extends to the enumeration of proprietors, church, town, and county records. Considering the lack of official data in the line of religious statistics, the lists of churches, existing and extinct, with date of organization and denomination, will be of interest. From a table on page xxxi it appears that there are 2060 churches in the state.

*Annual Report of the Supervising Surgeon-General of the Marine-Hospital Service of the United States for the fiscal year* 1888. Washington. Pp. 406.

Besides the regular statistical tables of the marine-hospital service, there is published in this volume a paper entitled "Studies in service statistics: pneumonia, syphilis, and typhoid fever," in which a statistical analysis is made of 45,118 cases of syphilis; 1649 of pneumonia, and 1637 of enteric fever.

## BOOKS RECEIVED BY THE LIBRARY.

### PRISON REPORTS.

**California.** Fifth-Ninth Annual Reports of State Board of Prison Directors. June 30, 1884–1888. Pp. 73, 122, 106, 100. (5)

**Colorado.** Biennial Report of the State Penitentiary, Cañon City, ending Sept. 30, 1888. Pp. 135. (1)

Fourth Biennial Report of State Industrial School. Golden, 1887–1888. Pp. 89. (1)

**Georgia.** Biennial Report of the Principal Keeper of the Penitentiary, Atlanta, ending Oct. 1, 1888. Pp. 122. (1)

**Illinois.** Biennial Reports of Commissioners of Southern Illinois Penitentiary, Chester, ending Sept. 30, 1886–1888. Pp. 72, 75. (2)

Annual Report of State Reform School, Pontiac, June 30, 1873. Pp. 18. (1)

Fourth-Tenth Biennial Reports, Oct. 1, 1876–1888. Pp. 44, 46, 62, 40, 57, 60, 65. (7)

Report of Inspectors of House of Correction, Chicago. 1888. Pp. 50. (1)

**Indiana.** Annual Report of Indiana State Prison, North, Michigan City, ending Oct. 31, 1888. Pp. 99. (1)

Fourth, Sixth, Eighth, Tenth, Eleventh, Twelfth, Fourteenth, Sixteenth, Seventeenth, Reports of the Reformatory, Institution for Women and Girls, Indianapolis. 1877, 1879, 1881, 1882, 1883, 1885, 1887, 1888. Pp. 28, 24, 50, 63, 62, 47, 58, 60, 64. (9)

Annual Report of Directors and Officers of State Prison, South, Jeffersonville, ending Oct. 31, 1888. Pp. 40. (1)

**Iowa.** Biennial Report of Warden of Penitentiary, Fort Madison, June 30, 1887. Pp. 74. (1)

Eighth Biennial Report of Warden of Additional Penitentiary, Anamosa, June 1, 1887. Pp. 41. (1)

**Maryland.** Annual Report of the Jail of Baltimore City, 1888. Pp. 31. (1)

First, Second, Fourth, Sixth-Twentieth Annual Reports of St. Mary's Industrial School for Boys, Baltimore, 1868, 1869, 1872, 1874–1888. Pp. 24–32. (18)

Thirty-sixth-Thirty-eighth Annual Reports of House of Refuge, Carroll, 1887–1889. Pp. 29, 28, 23. (3)

**Massachusetts.** First-Eleventh Annual Reports of the Commissioners of Prisons on the Reformatory Prison for Women, Sherborn, 1878–1888. Pp. 47–73. (11)

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